IMPORTANT NOTICE

THE DOCUMENT IS AVAILABLE ONLY TO INVESTORS WHO ARE EITHER (1) QIBs (AS DEFINED BELOW) UNDER RULE 144A OF THE SECURITIES ACT (AS DEFINED BELOW) OR (2) NON-U.S. PERSONS (AS DEFINED BELOW) PURCHASING THE SECURITIES OUTSIDE THE UNITED STATES IN AN OFFSHORE TRANSACTION IN RELIANCE ON REGULATION S UNDER THE SECURITIES ACT.

IMPORTANT: You must read the following before continuing. *If you are not the intended recipient of this message, please do not distribute or copy the information in this e-mail, but instead, delete and destroy all copies of this e-mail including all attachments.* The following applies to the offering circular following this page. You are therefore advised to read this carefully before reading, accessing or making any other use of the offering circular. In accessing the offering circular, you agree to be bound by the following terms and conditions, including any modifications to them any time you receive any information from us as a result of such access.

NOTHING IN THIS ELECTRONIC TRANSMISSION CONSTITUTES AN OFFER OF SECURITIES FOR SALE IN ANY JURISDICTION WHERE IT IS UNLAWFUL TO DO SO. THE SECURITIES HAVE NOT BEEN, AND WILL NOT BE, REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "**SECURITIES ACT**"), OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR OTHER JURISDICTION AND THE SECURITIES MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS (AS DEFINED IN REGULATION S UNDER THE SECURITIES ACT), EXCEPT PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND APPLICABLE STATE OR LOCAL SECURITIES LAWS.

THE SECURITIES HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKETS ACT OF KOREA, AS AMENDED. ACCORDINGLY, THE SECURITIES MAY NOT BE OFFERED, SOLD, DELIVERED OR TRANSFERRED, DIRECTLY OR INDIRECTLY, IN THE REPUBLIC OF KOREA ("**KOREA**") OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, ANY KOREAN RESIDENT (AS SUCH TERM IS DEFINED IN THE FOREIGN EXCHANGE TRANSACTION ACT OF KOREA AND THE ENFORCEMENT DECREE THEREOF) FOR A PERIOD OF ONE YEAR FROM THE DATE OF ISSUANCE OF THE SECURITIES, EXCEPT (I) IF ARTICLE 2-2-2, PARAGRAPH 2, ITEM 3 OF THE REGULATION ON THE ISSUANCE OF SECURITIES AND PUBLIC DISCLOSURE OF KOREA IS APPLICABLE, THE SECURITIES MAY BE OFFERED, SOLD, DELIVERED OR TRANSFERRED BETWEEN OR AMONG KOREAN QUALIFIED INSTITUTIONAL INVESTORS AS SPECIFIED IN ARTICLE 2-2, PARAGRAPH 2, ITEM 4 OF THE ABOVE-MENTIONED REGULATION, OR (II) AS OTHERWISE PERMITTED BY APPLICABLE KOREAN LAWS AND REGULATIONS.

THE FOLLOWING OFFERING CIRCULAR MAY NOT BE FORWARDED OR DISTRIBUTED TO ANY OTHER PERSON AND MAY NOT BE REPRODUCED IN ANY MANNER WHATSOEVER. ANY FORWARDING, DISTRIBUTION OR REPRODUCTION OF THIS DOCUMENT IN WHOLE OR IN PART IS UNAUTHORIZED. FAILURE TO COMPLY WITH THIS DIRECTIVE MAY RESULT IN A VIOLATION OF THE SECURITIES ACT OR THE APPLICABLE LAWS OF OTHER JURISDICTIONS. ANY INVESTMENT DECISION SHOULD BE MADE ON THE BASIS OF THE FINAL TERMS AND CONDITIONS OF THE RELEVANT SECURITIES AND THE INFORMATION CONTAINED IN THE OFFERING CIRCULAR AS SUPPLEMENTED BY THE FINAL PRICING SUPPLEMENT THAT WILL BE DISTRIBUTED TO YOU PRIOR TO THE CLOSING DATE AND NOT ON THE BASIS OF THE ATTACHED DOCUMENT. IF YOU HAVE GAINED ACCESS TO THIS TRANSMISSION CONTRARY TO ANY OF THE FOREGOING RESTRICTIONS, YOU ARE NOT AUTHORIZED AND WILL NOT BE ABLE TO PURCHASE ANY OF THE SECURITIES DESCRIBED THEREIN.

Confirmation and your Representation: In order to be eligible to view the following offering circular or make an investment decision with respect to the securities, investors must be either (1) qualified institutional buyers ("**QIBs**") (within the meaning of Rule 144A under the Securities Act) or (2) addressees who are not U.S. persons (within the meaning of Regulation S under the Securities Act) ("**non-U.S. persons**") purchasing the securities outside the United States in an offshore transaction in reliance on Regulation S under the Securities Act. By accepting the e-mail and accessing the following offering circular, you shall be deemed to have represented to us that (1) you and any customers you represent are either (a) QIBs or (b) non-U.S. persons and that the electronic mail address that you gave us and to which this e-mail has been delivered is not located in the United States, its territories or possessions and (2) you consent to the delivery of such offering circular by electronic transmission.

You are reminded that this offering circular has been delivered to you on the basis that you are a person into whose possession this offering circular may be lawfully delivered in accordance with the laws of jurisdiction in which you are located and you may not, nor are you authorized to, deliver or disclose the contents of this offering circular to any other person.

The materials relating to the offering do not constitute, and may not be used in connection with, an offer or solicitation in any place where offers or solicitations are not permitted by law.

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You should not reply by e-mail to this announcement, and you may not purchase any securities by doing so. Any reply e-mail communications, including those you generate by using the "Reply" function on your e-mail software, will be ignored or rejected. You are responsible for protecting against viruses and other destructive items. Your use of this e-mail is at your own risk and it is your responsibility to take precautions to ensure that it is free from viruses and other items of a destructive nature.

PRICING SUPPLEMENT

SHINHAN BANK

(incorporated with limited liability under the laws of the Republic of Korea)

Issue of US$500,000,000 Floating Rate Notes due 2025
under the U.S.$6,000,000,000
Global Medium Term Note Program

THE NOTES TO WHICH THIS PRICING SUPPLEMENT RELATES (THE "NOTES") HAVE NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR WITH ANY SECURITIES REGULATORY AUTHORITY OF ANY STATE OR OTHER JURISDICTION OF THE UNITED STATES AND, UNLESS SO REGISTERED, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS (AS DEFINED IN REGULATION S UNDER THE SECURITIES ACT), EXCEPT PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND APPLICABLE STATE SECURITIES LAWS. ACCORDINGLY, THE NOTES WILL BE OFFERED AND SOLD ONLY (I) OUTSIDE THE UNITED STATES TO NON-U.S. PERSONS IN RELIANCE ON REGULATION S AND (II) WITHIN THE UNITED STATES IN RELIANCE ON RULE 144A UNDER THE SECURITIES ACT ("RULE 144A") TO QUALIFIED INSTITUTIONAL BUYERS (AS DEFINED UNDER RULE 144A).

Lead Manager

HSBC BANK (TAIWAN) LIMITED

Joint Managers

Citibank Taiwan Limited

Crédit Agricole Corporate and Investment Bank, Taipei Branch

Co-Managers

Bank of Taiwan
Cathay United Bank Co., Ltd.
E.SUN Commercial Bank, Ltd.
Taipei Fubon Commercial Bank Co., Ltd.
Yuanta Securities Co., Ltd.

Bank SinoPac Co., Ltd.
CTBC Bank Co., Ltd.
SinoPac Securities Corp.
Taishin International Bank Co., Ltd.

(together with the Lead Manager and Joint Managers, the "**Managers**")

The date of this pricing supplement is April 13, 2020.

PROHIBITION OF SALES TO EEA AND UK RETAIL INVESTORS — The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area ("**EEA**") or in the United Kingdom ("**UK**"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of MiFID II; (ii) a customer within the meaning of Directive (EU) 2016/97, as amended, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Regulation (EU) 2017/1129, as amended. Consequently no key information document required by Regulation (EU) No 1286/2014 (as amended, the "**PRIIPs Regulation**") for offering or selling the Notes or otherwise making them available to retail investors in the EEA or in the UK has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA or in the UK may be unlawful under the PRIIPs Regulation.

NOTIFICATION UNDER SECTION 309B(1)(C) OF THE SECURITIES AND FUTURES ACT, CHAPTER 289 OF SINGAPORE (THE "SFA") — the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes are prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Pricing Supplement dated April 13, 2020

Shinhan Bank

Issue of US$500,000,000 Floating Rate Notes due 2025
under the US$6,000,000,000
Global Medium Term Note Program

This document constitutes the Pricing Supplement relating to the issue of Notes described herein. Terms used herein shall be deemed to be defined as such for the purposes of the Terms and Conditions of the Notes (the "**Conditions**") set forth in the offering circular dated April 3, 2020 (the "**Offering Circular**"). This Pricing Supplement is supplemental to and must be read in conjunction with the Offering Circular.

1.	Issuer:	Shinhan Bank, acting through its principal office in Korea (Legal Entity Identifier: 5493003P813VL21KG928)
2.	(i) Series Number:	70
	(ii) Tranche Number:	1
	(iii) Re-opening:	No
3.	Specified Currency or Currencies:	U.S. Dollars (US$)
4.	Aggregate Nominal Amount:	
	(i) Series:	US$500,000,000
	(ii) Tranche:	US$500,000,000

5.	(i)	Issue Price of Tranche:	100% of the Aggregate Nominal Amount
	(ii)	Net Proceeds (after deducting underwriting discounts and commissions but not estimated expenses):	US$498,250,000
	(iii)	Use of Proceeds:	General corporate purposes
6.	(i)	Specified Denominations:	US$200,000 and integral multiples of US$1,000 in excess thereof
	(ii)	Calculation Amount:	US$1,000
7.	(i)	Issue Date:	April 24, 2020
	(ii)	Interest Commencement Date:	April 24, 2020
8.	Maturity Date:		April 24, 2025
9.	Interest Basis:		3-month U.S.$ LIBOR + 1.70% per annum (further particulars specified below)
10.	Redemption/Payment Basis:		Redemption at par
11.	Change of Interest Basis or Redemption/ Payment Basis:		None
12.	Put/Call Options:		Not Applicable
13.	Status of the Notes:		Senior
14.	Listing:		An application will be made by the Issuer for the Notes to be listed and admitted for trading on the Taipei Exchange (**"TPEx"**). The Notes will be traded on the TPEx pursuant to the applicable rules of the TPEx. Effective date of listing of and trading of the Notes shall be on or about the Issue Date. Approval in-principle has been received from the Singapore Exchange Securities Trading Limited ("**SGX-ST**") for the listing and quotation of the Notes on the SGX-ST.
15.	Method of Distribution:		Syndicated

PROVISIONS RELATING TO INTEREST (IF ANY) PAYABLE

16.	Fixed Rate Note Provisions:		Not Applicable
17.	Floating Rate Note Provisions:		Applicable
	(i)	Specified Period(s)/Specified Interest Payment Dates:	From (and including) the Issue Date up to (but excluding) the first Interest Payment Date and each successive period beginning on (and including) an Interest Payment Date and ending on (but excluding) the next succeeding Interest Payment Date up to the Maturity Date, in each case, subject to adjustment in accordance with the Modified Following Business Day Convention. Interest will be payable quarterly in arrears on January 24, April 24, July 24 and October 24 of each year, commencing on July 24, up to and including the Maturity Date.

	(ii) Business Day Convention:	Modified Following Business Day Convention
	(iii) Additional Business Center(s):	New York City, London, Seoul and Taipei
	(iv) Manner in which the Rate of Interest and Interest Amount are to be determined:	Screen Rate Determination
	(v) Party responsible for calculating the Rate of Interest and Interest Amount (if not the Agent):	Not Applicable
	(vi) Screen Rate Determination:	Applicable
	— Reference Rate:	3-month U.S.$ LIBOR
	— Interest Determination Date(s):	Second London business day prior to the start of each Interest Period
	— Relevant Screen Page:	LIBOR 01
	(vii) ISDA Determination:	Not Applicable
	(viii) Margin(s):	+1.70% per annum
	(ix) Minimum Rate of Interest:	0.00% per annum
	(x) Maximum Rate of Interest:	Not Applicable
	(xi) Day Count Fraction:	Actual/360, adjusted
	(xii) Fall back provisions, rounding provisions and any other terms relating to the method of calculating interest on Floating Rate Notes, if different from those set out in the Conditions:	Not Applicable
18.	Zero Coupon Note Provisions:	Not Applicable
19.	Index Linked Interest Note Provisions:	Not Applicable
20.	Dual Currency Note Provisions:	Not Applicable

PROVISIONS RELATING TO REDEMPTION

21.	Issuer Call:	Not Applicable
22.	Investor Put:	Not Applicable
23.	Final Redemption Amount of each Note:	US$1,000 per Calculation Amount
24.	Early Redemption Amount of each Note payable on redemption for taxation reasons or on event of default and/or the method of calculating the same (if required or if different from that set out in Condition 8(e) (*Redemption and Purchase — Early Redemption Amounts*)):	US$1,000 per Calculation Amount

GENERAL PROVISIONS APPLICABLE TO THE NOTES

25.	Form of Notes:	Registered Notes: Regulation S Global Note registered in the name of a nominee for DTC and Rule 144A Global Note registered in the name of a nominee for DTC

26.	Additional Financial Center(s) or other special provisions relating to Payment Dates:	New York City, London, Seoul and Taipei
27.	Talons for future Coupons or Receipts to be attached to Definitive Bearer Notes (and dates on which such Talons mature):	Not Applicable
28.	Details relating to Partly Paid Notes: amount of each payment comprising the Issue Price and date on which each payment is to be made and consequences of failure to pay, including any right of the Issuer to forfeit the Notes and interest due on late payment:	Not Applicable
29.	Details relating to Installment Notes:	Not Applicable
	(i) Installment Amount(s):	Not Applicable
	(ii) Installment Date(s):	Not Applicable
30.	Redenomination applicable:	Redenomination not applicable
31.	Other terms or special conditions:	Not Applicable

DISTRIBUTION

32.	(i) If syndicated, names of Managers:	HSBC BANK (TAIWAN) LIMITED *(as Lead Manager)* Citibank Taiwan Limited Crédit Agricole Corporate and Investment Bank, Taipei Branch *(as Joint Managers)* Bank of Taiwan Bank SinoPac Co., Ltd. Cathay United Bank Co., Ltd. CTBC Bank Co., Ltd. E.SUN Commercial Bank, Ltd. SinoPac Securities Corp. Taipei Fubon Commercial Bank Co., Ltd. Taishin International Bank Co., Ltd. Yuanta Securities Co., Ltd. *(as Co-Managers)*
	(ii) Stabilizing Manager(s) (if any):	Not Applicable
33.	If non-syndicated, name of relevant Dealer:	Not Applicable
34.	Whether TEFRA D or TEFRA C rules applicable or TEFRA rules not applicable:	TEFRA rules not applicable
35.	Prohibition of Sales to EEA Retail Investors:	Applicable
36.	Additional selling restrictions:	The Notes have not been, and shall not be, offered, sold or re-sold, directly or indirectly, to investors other than "professional institutional investors" as defined under Paragraph 2, Article 4 of the Financial Consumer Protection Act of the ROC. Purchasers of the Notes are not permitted to sell or otherwise dispose of the Notes except by transfer to a professional institutional investor.

OPERATIONAL INFORMATION

37.	Any clearing system(s) other than Euroclear and Clearstream and the relevant identification number(s):	DTC
38.	Delivery:	Delivery against payment
39.	In the case of Registered Notes, specify the location of the office of the Registrar if other than New York:	Not Applicable
40.	In the case of Bearer Notes, specify the location of the office of the Principal Paying Agent if other than London:	Not Applicable
41.	Additional Paying Agent(s) (if any):	Not Applicable
42.	Alternate Settlement Rate Determination Agent (if any):	Not Applicable

ISIN:	Rule 144A Notes: US82460CAP95 Regulation S Notes: US82460EAP51
CUSIP:	Rule 144A Notes: 82460CAP9 Regulation S Notes: 82460EAP5
Common Codes:	Rule 144A Notes: 215580512 Regulation S Notes: 215580270

LISTING APPLICATION

This Pricing Supplement comprises the details required to list the issue of Notes described herein pursuant to the listing of the US$6,000,000,000 Global Medium Term Note Program of Shinhan Bank.

Application will be made on behalf of the Issuer to the TPEx for the listing of, and permission to deal in, the Notes by way of debt issues to professional institutional investors as defined under Paragraph 2, Article 4 of the Financial Consumer Protection Act of the ROC. The Notes will be listed and traded on the TPEx pursuant to the applicable rules of TPEx. Effective date of listing and trading of the Notes is on or about the Issue Date. The TPEx is not responsible for the content of this Pricing Supplement and the Offering Circular and any supplement or amendment thereto and no representation is made by the TPEx to the accuracy or completeness of this Pricing Supplement and the Offering Circular and any supplement or amendment thereto. The TPEx expressly disclaims any and all liability for any losses arising from, or as a result of the reliance on, all or part of the contents of this Pricing Supplement and the Offering Circular and any supplement or amendment thereto. Admission to the listing and trading of the Notes on the TPEx shall not to be taken as an indication of the merits of the Issuer or the Notes. No assurances can be given as to whether the Notes will be, or will remain, listed on the TPEx. If the Notes fail to, or cease to, be listed on the TPEx, certain investors may not invest in, or continue to hold or invest in, the Notes.

Approval in-principle has been received from the SGX-ST for the listing and quotation of the Notes on the SGX-ST. The SGX-ST assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained herein. Approval in-principle from, admission to the Official List of, and listing and quotation of the Notes on, the SGX-ST are not to be taken as an indication of the merits of the Issuer, the Program or the Notes.

NOTICES

If and for so long as the Notes are listed on the TPEx and for so long as the rules of the TPEx so require, all notices regarding the Notes and the Issuer required by the rules of TPEx shall also be published on a website designated by the Taiwan Financial Supervisory Commission (currently, http://mops.twse.com.tw/T113.htm).

OTHER RELATIONSHIPS

Certain affiliates of the Joint Managers have from time to time performed banking and advisory services in the ordinary course of business for the Issuer for which they have received customary fees and expenses. The Joint Managers and certain of their affiliates may, from time to time, engage in transactions with and perform services for this Issuer in the ordinary course of business.

The Managers or certain of their respective affiliates may purchase the Notes and be allocated Notes for asset management and/or proprietary purposes and not with a view to distribution.

RATINGS OF THE NOTES

The Notes are expected to be rated Aa3 by Moody's Investors Service, A+ by Standard & Poor's Rating Services, a division of the McGraw-Hill Companies, Inc., and A by Fitch Ratings Ltd. Such ratings do not constitute a recommendation to buy, sell or hold the Notes and may be subject to revision or withdrawal at any time by such rating organizations. Each such rating should be evaluated independently of any other rating of the Notes.

RISK FACTORS RELATING TO THE NOTES

No public market exists for the Notes. Approval in-principle has been received from the SGX-ST for the listing and quotation of the Notes on the SGX-ST, and application for the listing of the Notes will be made to the TPEx. No assurances can be given as to whether the Notes will be, or will remain, listed on TPEx and the SGX-ST or whether a trading market for the Notes will develop or as to the liquidity of any such trading market. If the Notes fail to or cease to be listed on TPEx or the SGX-ST, certain investors may not invest in, or continue to hold or invest in, the Notes. If any of the Notes are traded after their initial issue, they may be traded at a discount or premium from their initial offering price, depending on prevailing interest rates, the market for similar securities and the market for the Notes and other factors, including general economic conditions and the Issuer's financial condition, performance and prospects. No assurance can be given as to the future price level of the Notes after their initial issue.

The Notes may be sold to a limited number of investors and liquidity of the Notes may be adversely affected if a significant portion of the Notes is bought by limited investors.

ROC TAXATION

The following is a general description of the principal ROC tax consequences for investors receiving interest in respect of, or disposing of, the Notes and is of a general nature based on the Issuer's understanding of current law and practice. It does not purport to be comprehensive and does not constitute legal or tax advice.

This general description is based upon the law as in effect on the date hereof and that the Notes will be issued, offered, sold and re-sold to professional institutional investors as defined under Paragraph 2, Article 4 of the Financial Consumer Protection Act of the ROC only. This description is subject to change potentially with retroactive effect. Investors should appreciate that, as a result of changing law or practice, the tax consequences may be otherwise than as stated below. Investors should consult their professional advisers on the possible tax consequences of subscribing for, purchasing, holding or selling the Notes.

Interest on the Notes

As the Issuer of the Notes is not a ROC statutory tax withholder, there is no ROC withholding tax on the interest or deemed interest to be paid by the Issuer on the Notes.

ROC corporate holders must include the interest or deemed interest receivable under the Notes as part of their taxable income and pay income tax at a flat rate of 20% (unless the total taxable income for a fiscal year is under NT$120,000), as they are subject to income tax on their worldwide income on an accrual basis. The alternative minimum tax (the "**AMT**") is not applicable.

Sale of the Notes

In general, the sale of corporate bonds or financial bonds is subject to 0.1% securities transaction tax ("**STT**") on the transaction price. However, Article 2-1 of the Securities Transaction Tax Act prescribes that STT will cease to be levied on the sale of corporate bonds and financial bonds from January 1, 2010 to December 31, 2026. Therefore, the sale of the Notes will be exempt from STT if the sale is conducted on or before December 31, 2026. Starting from January 1, 2027, any sale of the Notes will be subject to STT at 0.1 % of the transaction price, unless otherwise provided by the tax laws that may be in force at that time.

Capital gains generated from the sale of bonds are exempt from income tax. Accordingly, ROC corporate holders are not subject to income tax on any capital gains generated from the sale of the Notes. However, ROC corporate holders should include the capital gains in calculating their basic income for the purpose of calculating their AMT. If the amount of the AMT exceeds the ordinary income tax calculated pursuant to the ROC Income Basic Tax Act (also known as the AMT Act), the excess becomes the ROC corporate holders' AMT payable. Capital losses, if any, incurred by such holders could be carried over 5 years to offset against capital gains of same category of income for the purposes of calculating their AMT.

ROC SETTLEMENT AND TRADING

Investors with a securities book-entry account with a ROC securities broker and a foreign currency deposit account with a ROC bank, may request the approval of the Taiwan Depository & Clearing Corporation ("**TDCC**") for the settlement of the Notes through the account of TDCC with Euroclear System Bank S.A./N.V. ("**Euroclear**") or Clearstream Banking S.A. ("**Clearstream**"), which will then settle through its respective account with DTC, and if such approval is granted by the TDCC, the Notes may be so cleared and settled. In such circumstances, TDCC will allocate the respective Notes position to the securities book-entry account designated by such investor in the ROC. The Notes will be traded and settled pursuant to the applicable rules and operating procedures of TDCC and the TPEx as domestic bonds.

In addition, an investor may apply to TDCC (by filing in a prescribed form) to transfer the Notes in its own account with Euroclear or Clearstream to the TDCC account with Euroclear or Clearstream for trading in the domestic market or vice versa for trading in overseas markets.

For such investors who hold their interest in the Notes through an account opened and held by TDCC with Euroclear or Clearstream, distributions of principal and/or interest for the Notes to such holders may be made by payment services banks whose systems are connected to TDCC to the foreign currency deposit accounts of the holders. Such payment is expected to be made on the second Taiwanese business day following TDCCs receipt of such payment (due to time difference, the payment is expected to be received by TDCC one Taiwanese business day after the distribution date). However, when the holders actually receive such distributions may vary depending upon the daily operations of the ROC banks with which the holder has the foreign currency deposit account.

RESPONSIBILITY

The Issuer accepts responsibility for the information contained in this Pricing Supplement.

SHINHAN BANK

(incorporated with limited liability under the laws of the Republic of Korea)

US$6,000,000,000
Global Medium Term Note Program

On March 5, 2010, Shinhan Bank (the "**Issuer**" or the "**Bank**") established a US$6,000,000,000 Global Medium Term Note Program (the "**Program**", as amended, supplemented or restated), and as of the same date, the Issuer prepared an offering circular, as amended or supplemented from time to time, which describes the Program. This offering circular updates the Program and supersedes any previous offering circular describing the Program. Any Notes (as defined below) issued under the Program on or after the date of this offering circular are issued subject to the provisions described herein. This does not affect any Notes issued before the date of this offering circular.

Under this Program, the Issuer may from time to time issue notes (the "**Notes**") denominated in any currency agreed between the Issuer and the relevant Dealer (as defined below). The Notes may be issued in bearer or registered form (respectively "**Bearer Notes**" and "**Registered Notes**"). The maximum aggregate nominal amount of all Notes from time to time outstanding under the Program will not exceed US$6,000,000,000 (or its equivalent in other currencies calculated as described herein), subject to increase as described herein.

The Notes may be issued on a continuing basis to one or more of the Dealers specified under "*Summary of the Program*" and any additional Dealer appointed under the Program from time to time by the Issuer (each a "**Dealer**" and together the "**Dealers**"), which appointment may be for a specific issue or on an ongoing basis. References in this offering circular to the "**relevant Dealer**" shall, in the case of an issue of Notes being (or intended to be) subscribed by more than one Dealer, be to all Dealers agreeing to purchase such Notes.

Approval in-principle has been received from the Singapore Exchange Securities Trading Limited (the "**SGX-ST**") in connection with the Program and application will be made for the listing and quotation of any Notes that may be issued under the Program which are agreed, at or prior to the time of issue thereof, to be so listed and quoted on the SGX-ST. Such permission will be granted when such Notes have been admitted for listing and quotation on the SGX-ST. The SGX-ST assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained in this offering circular. Approval in-principle from, admission to the Official List of, and listing and quotation of any Notes on, the SGX-ST are not to be taken as an indication of the merits of the Issuer or the merits of the Program or the Notes.

Notice of the aggregate nominal amount of Notes, interest (if any) payable in respect of Notes, the issue price of Notes and any other terms and conditions not contained herein which are applicable to each Tranche (as defined under "*Terms and Conditions of the Notes*") of Notes will be set out in a pricing supplement (the "**Pricing Supplement**") a copy of which, with respect to Notes to be listed and quoted on the SGX-ST, will be submitted to the SGX-ST before the date of listing of the Notes of such Tranche.

The Program provides that Notes may be listed on such other or further stock exchange(s) as may be agreed between the Issuer and the relevant Dealers. The Issuer may also issue unlisted Notes.

See "Risk Factors" for a discussion of certain factors to be considered in connection with an investment in the Notes.

The Notes of each Series (as defined under "*Terms and Conditions of the Notes*") will be in either bearer form, with or without interest coupons attached, or registered form, without interest coupons attached. Bearer Notes will be issued only outside the United States to non-U.S. persons in reliance on the exemption from registration provided by Regulation S under the U.S. Securities Act of 1933, as amended (the "**Securities Act**"), and Registered Notes may be issued both outside the United States to non-U.S. persons in reliance on the exemption from registration provided by Regulation S under the Securities Act and within the United States or to U.S. persons in private transactions (i) to "qualified institutional buyers" within the meaning of Rule 144A under the Securities Act ("**QIBs**") or (ii) to "accredited investors" (as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act) that are institutions ("**Institutional Accredited Investors**") who agree to purchase the Notes for their own account and not with a view to the distribution thereof. See "*Form of the Notes*" for a description of the manner in which Notes will be issued. Notes are subject to certain restrictions on transfer. See "*Subscription and Sale and Transfer and Selling Restrictions*."

Bearer Notes are subject to U.S. tax law requirements and may not be offered, sold or delivered within the United States or its possessions or to U.S. persons, except in certain transactions permitted by U.S. Treasury regulations. Terms used in this paragraph have the meanings given to them by the U.S. Internal Revenue Code of 1986, as amended and U.S. Treasury regulations promulgated thereunder.

The Notes have not been and will not be registered under the Financial Investment Services and Capital Markets Act of Korea, as amended (the "**FSCMA**"), and may not be offered, sold, delivered or transferred, directly or indirectly, in Korea or to, or for the account or benefit of, any Korean resident (as defined in the Foreign Exchange Transaction Act of Korea and the Enforcement Decree thereof) for a period of one year from the date of issuance of the Notes, except (i) if Article 2-2-2, Paragraph 2, Item 3 of the Regulation on the Issuance of Securities and Public Disclosure of Korea is applicable, the Notes may be offered, sold, delivered or transferred between or among Korean Qualified Institutional Investors as specified in Article 2-2, Paragraph 2, Item 4 of the above-mentioned regulation, *provided* that at least 80% of the aggregate issuance amount of the Notes shall be allocated to non-residents of Korea (as defined in the Foreign Exchange Transaction Act of Korea and the Enforcement Decree thereof) (which applies only to the Notes acquired from the Issuer or any underwriter at the time of issuance of the Notes), and the other requirements as set forth in Article 2-2-2, Paragraph 2, Item 3 above are satisfied or (ii) as otherwise permitted by applicable Korean laws and regulations.

The Issuer may agree with the relevant Dealer that Notes may be issued in a form not contemplated by the Terms and Conditions of the Notes herein, in which event (in the case of Notes intended to be listed and quoted on the SGX-ST) a supplementary offering circular, if appropriate, will be made available which will describe the effect of the agreement reached in relation to such Notes.

Arranger

HSBC

Dealers

BofA Securities | **Citigroup**
Crédit Agricole CIB | **HSBC**
J.P. Morgan

The date of this offering circular is April 3, 2020.

The Issuer, having made all reasonable enquiries, confirms that this offering circular contains or incorporates all information which is material in the context of the issue and offering of Notes, that the information contained or incorporated by reference in this offering circular is true and accurate in all material respects and is not misleading in any material respect, that the opinions and intentions expressed in this offering circular are honestly held and have been reached after considering all relevant circumstances and are based on reasonable assumptions and that there are no other facts the omission of which would, in the context of the issue and offering of the Notes, make this offering circular as a whole or any information or the expression of any opinions or intentions in this offering circular misleading in any material respect. The Issuer accepts responsibility accordingly. No representation, warranty or undertaking, express or implied, is made and no responsibility or liability is accepted by the Dealers as to the accuracy or completeness of the information contained or incorporated by reference in this offering circular or any other information provided by the Issuer in connection with the Program. No Dealer accepts any liability in relation to the information contained or incorporated by reference in this offering circular or any other information provided by the Issuer in connection with the Program.

This offering circular is to be read in conjunction with all documents which are deemed to be incorporated herein by reference (see "*Documents Incorporated by Reference*"). This offering circular shall be read and construed on the basis that such documents are incorporated and form part of this offering circular.

No person is or has been authorized by the Issuer to give any information or to make any representation which is not contained in or which is not consistent with this offering circular or any other information supplied by or on behalf of the Issuer in connection with the Program or the Notes, and, if given or made, such information or representation must not be relied upon as having been authorized by the Issuer or any of the Dealers.

Neither this offering circular nor any other information supplied in connection with the Program or any Notes (i) is intended to provide the basis of any credit or other evaluation or (ii) should be considered as a recommendation or constituting an invitation or offer by the Issuer or any of the Dealers that any recipient of this offering circular or any other information supplied in connection with the Program or any Notes should purchase any Notes. Each investor contemplating purchasing any Notes should make its own independent investigation of the financial condition and affairs, and its own appraisal of the creditworthiness, of the Issuer. Neither this offering circular nor any other information supplied in connection with the Program or the issue of any Notes constitutes an offer or invitation by or on behalf of the Issuer or any of the Dealers to any person to subscribe for or to purchase any Notes.

Neither the delivery of this offering circular nor the offering, sale or delivery of any Notes shall in any circumstances imply that the information contained herein concerning the Issuer is correct at any time subsequent to the date hereof or that any other information supplied in connection with the Program is correct as of any time subsequent to the date indicated in the document containing the same. The Dealers expressly do not undertake to review the financial condition or affairs of the Issuer during the life of the Program or to advise any investor in the Notes of any information coming to their attention. Investors should review, *inter alia*, the most recently published documents incorporated by reference in this offering circular when deciding whether or not to purchase any Notes.

This offering circular does not constitute an offer to sell or the solicitation of an offer to buy any Notes in any jurisdiction to any person to whom it is unlawful to make the offer or solicitation in such jurisdiction. The distribution of this offering circular and the offer or sale of Notes may be restricted by law in certain jurisdictions. Neither the Issuer nor any of the Dealers represents that this offering circular may be lawfully distributed, or that any Notes may be lawfully offered, in compliance with any applicable registration or other requirements in any such jurisdiction, or pursuant to an exemption available thereunder, or assume any responsibility for facilitating any such distribution or offering. In particular, no action has been taken by the Issuer or the Dealers which would permit a public offering of any Notes or distribution of this document in any jurisdiction where action for that purpose is required. Accordingly, no Notes may be offered or sold, directly or indirectly, and neither this offering circular nor any advertisement or other offering material may be distributed or published in any jurisdiction, except under circumstances that will result in compliance with any applicable laws and regulations. Persons into whose possession this offering circular or any Notes come must inform themselves about, and observe, any such restrictions on the distribution of this offering circular and the offering and sale of Notes. In particular, there are restrictions on the distribution of this offering circular and the offer or sale of Notes in the United States, the European Economic Area (including Germany), the United Kingdom, Japan, Korea, Singapore, Hong Kong, the People's Republic of China, Canada and Switzerland. See "*Subscription and Sale and Transfer and Selling Restrictions*."

In making an investment decision, investors must rely on their own examination of the Issuer and the terms of the Notes being offered, including the merits and risks involved. The Notes have not been approved or disapproved by the U.S. Securities and Exchange Commission or any other securities commission or other regulatory authority in the United States, nor have the foregoing authorities approved this offering circular or confirmed the accuracy or determined the adequacy of the information contained in this offering circular. Any representation to the contrary is unlawful.

None of the Dealers or the Issuer makes any representation to any investor in the Notes regarding the legality of its investment under any applicable laws. Any investor in the Notes should be able to bear the economic risk of an investment in the Notes for an indefinite period of time.

MIFID II Product Governance / Target Market — The final terms (or pricing supplement, as the case may be) in respect of any Notes may include a legend entitled "MiFID II Product Governance" which will outline the target market assessment in respect of the Notes and which channels for distribution of the Notes are appropriate. Any person subsequently offering, selling or recommending the Notes (a "**distributor**") should take into consideration the target market assessment; however, a distributor subject to Directive 2014/65/EU (as amended, "**MiFID II**") is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the target market assessment) and determining appropriate distribution channels.

A determination will be made in relation to each issue about whether, for the purpose of the MiFID Product Governance rules under EU Delegated Directive 2017/593 (the "**MiFID Product Governance Rules**"), any Dealer subscribing for any Notes is a manufacturer in respect of such Notes, but otherwise neither the Arranger nor the Dealers nor any of their respective affiliates will be a manufacturer for the purpose of the MIFID Product Governance Rules.

PROHIBITION OF SALES TO EEA AND UK RETAIL INVESTORS — If the final terms (or pricing supplement, as the case may be) in relation to the Notes includes a legend entitled "Prohibition of Sales to EEA and UK Retail Investors," the Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area ("**EEA**") or in the United Kingdom ("**UK**"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of MiFID II; (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended, "**IDD**"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Regulation (EU) 2017/1129 (as amended, the "**Prospectus Regulation**"). Consequently no key information document required by Regulation (EU) No 1286/2014 (as amended, the "**PRIIPs Regulation**") for offering or selling the Notes or otherwise making them available to retail investors in the EEA or in the UK has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA or in the UK may be unlawful under the PRIIPs Regulation.

NOTIFICATION UNDER SECTION 309B(1)(C) OF THE SECURITIES AND FUTURES ACT, CHAPTER 289 OF SINGAPORE (THE "SFA") — Unless otherwise stated in the Pricing Supplement in respect of any Notes, the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes to be issued under the Program shall be prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

U.S. INFORMATION

This offering circular is being submitted on a confidential basis in the United States to a limited number of QIBs or Institutional Accredited Investors (each as defined under "*Form of the Notes*") for informational use solely in connection with the consideration of the purchase of the Notes being offered hereby. Its use for any other purpose in the United States is not authorized. It may not be copied or reproduced in whole or in part nor may it be distributed or any of its contents disclosed to anyone other than the prospective investors to whom it is originally submitted.

The Notes may be offered and sold outside the United States to non-U.S. persons pursuant to Regulation S under the Securities Act ("**Regulation S**"). Registered Notes may be offered or sold within the United States only to QIBs or to Institutional Accredited Investors, in either case in transactions exempt from registration under the Securities Act. Each U.S. purchaser of Registered Notes is hereby notified that the offer and sale of any Registered Notes to it may be made in reliance upon the exemption from the registration requirements of the Securities Act provided by Rule 144A under the Securities Act ("**Rule 144A**") or other available exemption.

Purchasers of Definitive IAI Registered Notes will be required to execute and deliver an IAI Investment Letter (as defined under "*Terms and Conditions of the Notes*"). Each purchaser or holder of Definitive IAI Registered Notes, Notes represented by a Rule 144A Global Note (as defined under "*Form of the Notes*") or any Notes issued in registered form in exchange or substitution therefor (together "**Legended Notes**") will be deemed, by its acceptance or purchase of any such Legended Notes, to have made certain representations and agreements intended to restrict the resale or other transfer of such Notes as set out in "*Subscription and Sale and Transfer and Selling Restrictions*." Unless otherwise stated, terms used in this paragraph have the meanings given to them in "*Form of the Notes*."

The distribution of this offering circular and the offer, sale or delivery of Notes may be restricted by law in certain jurisdictions. Persons into whose possession this offering circular or any Notes come must inform themselves about, and observe, any such restrictions. The Notes have not been and will not be registered under the Securities Act, and include Notes that are in bearer form that are subject to U.S. tax law requirements and limitations. Subject to certain exceptions, Notes in bearer form may not be offered, sold or delivered within the United States or to U.S. persons. For a description of certain restrictions on offers and sales of Notes and on distribution of this offering circular, see "*Subscription and Sale and Transfer and Selling Restrictions*" below.

FORWARD LOOKING STATEMENTS

Certain statements in this offering circular constitute "forward-looking statements", including statements regarding the Issuer's expectations and projections for future operating performance and business prospects. The words "believe", "expect", "anticipate", "estimate", "project", "will", "aim", "will likely result", "will continue", "intend", "plan", "contemplate", "seek to", "future", "objective", "goal", "should", "will pursue" and similar expressions or variations of these expressions identify forward-looking statements. In addition, all statements other than statements of historical facts included elsewhere in this offering circular, including, without limitation, those regarding the Issuer's financial position and results, business strategy, plans and objectives of management for future operations, including development plans and objectives relating to the Issuer's products and services, are forward-looking statements. Such forward-looking statements and any other projections contained in this offering circular (whether made by the Issuer or any third party) involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements to be materially different from the future results, performance or achievements expressed or implied by forward-looking statements. Such forward-looking statements are based on current beliefs, assumptions, expectations, estimates and projections regarding the Issuer's present and future business strategies and the environment in which the Issuer will operate in the future. Among the important factors that could cause some or all of those assumptions not to occur or cause the Issuer's actual results, performance or achievements to differ materially from those in the forward-looking statements include, among other things:

- the risk of adverse impacts from an economic downturn in Korea and globally;
- the Issuer's ability to successfully implement its business strategy;
- the condition of and changes in the Korean, Asian or global economies, including changes in consumer confidence and spending;
- future levels of non-performing loans;
- the Issuer's growth and expansion, including whether the Issuer succeeds with its business strategy;
- changes in interest rates and changes in government regulation and licensing of the Issuer's businesses in Korea and in other jurisdictions where the Issuer may operate; and
- competition in the financial services industry.

Additional factors that could cause the Issuer's actual results, performance or achievements to differ materially include, but are not limited to, those discussed under "*Risk Factors*." Any forward-looking statements contained in this offering circular speak only as of the date of this offering circular. Each of the Issuer and the Dealers expressly disclaims any obligation or undertaking to release, publicly or otherwise, any updates or revisions to any forward-looking statement contained herein to reflect any change in the Issuer's expectations with regard thereto or any change in events, conditions, assumptions or circumstances on which any such statement was based.

CERTAIN DEFINED TERMS AND CONVENTIONS

Unless otherwise specified or the context otherwise requires, in this offering circular:

- all references to "**we**", "**us**", "**our**", the "**Issuer**" and the "**Bank**" shall mean Shinhan Bank; and
- all references to "**our holding company**", "**SFG**" and "**Shinhan Financial Group**" shall mean Shinhan Financial Group Co., Ltd., of which the Issuer is a wholly-owned subsidiary.

All references to “**Korea**” and the “**Republic**” contained in this offering circular shall mean The Republic of Korea. All references to the “**Government**” shall mean the government of The Republic of Korea. The “**Financial Services Commission**” or the “**FSC**” shall mean the Financial Services Commission of Korea, and the “**Financial Supervisory Service**” or the “**FSS**” shall mean the Financial Supervisory Service of Korea, the executive body of the FSC.

All references in this offering circular to “**U.S. dollars**”, “**dollars**”, “**US$**” and “**$**” refer to the lawful currency of the United States of America; all references in this offering circular to “**Won**” and “**₩**” refer to the lawful currency of Korea; all references in this offering circular to “**€**”, “**Euro**” and “**euro**” refer to the lawful currency introduced at the start of the third stage of European economic and monetary union pursuant to the Treaty establishing the European Community, as amended; all references in this offering circular to “**Chinese Yuan**”, “**CNY**”, “**Renminbi**” and “**RMB**” are to the lawful currency of the People’s Republic of China (the “**PRC**”); all references in this offering circular to “**Yen**” and “**¥**” refer to the lawful currency of Japan; and all references in this offering circular to “**S$**” refer to the lawful currency of Singapore. The Issuer maintains its accounts in Won. For convenience only, certain Won amounts have been translated into U.S. dollars. Unless otherwise specified, all such conversions were made at the market average exchange rate announced by Seoul Money Brokerage Services, Ltd. in Seoul for U.S. dollars against Won (the “**Market Average Exchange Rate**”). Unless otherwise stated, the translations of Won into U.S. dollars as of December 31, 2019 were made at the Market Average Exchange Rate in effect on such date, which was ₩1,157.8 = US$1.00. The Market Average Exchange Rate has been highly volatile recently and the U.S. dollar amounts referred to in this offering circular should not be relied upon as an accurate reflection of the Issuer’s results of operations. The Issuer expects this volatility to continue in the near future. No representation is made that the Won or U.S. dollar amounts referred to herein could have been or could be converted into U.S. dollars or Won, as the case may be, at any particular rate or at all. The Market Average Exchange Rate on March 31, 2020 was ₩1,222.6 = US$1.00.

Any discrepancies in any table between totals and the sums of the amounts listed are due to rounding. References to billions are to thousands of millions.

PRESENTATION OF FINANCIAL AND OTHER INFORMATION

Unless stated otherwise, all financial information contained in this offering circular is presented on a consolidated basis in accordance with International Financial Reporting Standards as adopted by Korea (“**K-IFRS**”) together with, where applicable, accounting and reporting guidelines under Korean accounting standards applicable to the banking industry. Financial and other information contained in this offering circular regarding individual borrowers, groups or categories of borrowers or classifications by industry, geography, size or other factors, including information as to loans, credits, total exposures, allowances, collateral values, non-performing loans and other items, is derived solely from the Issuer’s internal management information systems.

Under the Korean Banking Act of 1950, as amended (the “**Banking Act**”), assets accepted in trust by a bank in Korea must be segregated from its other assets in the accounts of that bank. Accordingly, banks, including the Issuer, engaged in the banking and trust businesses must maintain two separate accounts, the bank account and the trust account, and two separate sets of records, which provide details of their respective banking and trust businesses. All financial information contained in this offering circular relating to the Issuer is presented with respect to the Issuer’s bank account only, unless stated otherwise.

ENFORCEABILITY OF CIVIL LIABILITIES

The Issuer is a corporation organized under the laws of Korea. All or substantially all of the Issuer's directors and officers and certain other persons named in this offering circular reside in Korea, and all or a substantial portion of the assets of the directors and officers and certain other persons named in this offering circular and substantially all of the Issuer's assets are located in Korea. As a result, it may not be possible for you to effect service of process within the United States upon such persons or to enforce against them or against the Issuer in U.S. courts judgments predicated upon the civil liability provisions of the federal securities laws of the United States. There is doubt as to the enforceability in Korea, either in original actions or in actions for enforcement of judgments of U.S. courts, of civil liabilities predicated on the U.S. federal securities laws.

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In connection with the issue of any Tranche of Notes, the Dealer or Dealers (if any) named as the stabilizing manager(s) ("Stabilizing Manager(s)") (or persons acting on behalf of any Stabilizing Manager(s)) in the applicable Pricing Supplement may over-allot Notes or effect transactions with a view to supporting the market price of the Notes at a level higher than that which might otherwise prevail. However, there is no assurance that the Stabilizing Manager(s) (or person(s) acting on behalf of a Stabilizing Manager(s)) will undertake stabilization action. Any stabilization action may begin on or after the date on which adequate public disclosure of the terms of the offer of the relevant Tranche of Notes is made and, if begun, may be ended at any time, but it must end no later than the earlier of 30 days after the issue date of the relevant Tranche of Notes and 60 days after the date of the allotment of the relevant Tranche of Notes. Any stabilization action or over-allotment must be conducted by the relevant Stabilizing Manager(s) (or person(s) acting on behalf of any Stabilizing Manager(s)) in accordance with all applicable laws and rules.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents published or issued from time to time after the date hereof shall be deemed to be incorporated in, and to form part of, this offering circular:

(a) the publicly available audited annual consolidated and unaudited consolidated interim financial statements (if any) of the Issuer for the most recent financial period; see "*General Information*" for a description of the financial statements currently published by the Issuer; and

(b) all supplements or amendments to this offering circular circulated by the Issuer from time to time, except that any statement contained herein or in a document which is deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purpose of this offering circular to the extent that a statement contained in any such subsequent document which is deemed to be incorporated by reference herein modifies or supersedes such earlier statement (whether expressly, by implication or otherwise). Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this offering circular.

The Issuer will provide, without charge, to each person to whom a copy of this offering circular has been delivered, upon the request of such person, a copy of any or all of the documents deemed to be incorporated herein by reference unless such documents have been modified or superseded as specified above. Requests for such documents should be directed to the Issuer at its registered office set out at the end of this offering circular.

The Issuer will, in connection with the listing and quotation of the Notes on the SGX-ST, so long as the rules of the SGX-ST so require, in the event of any material change which is not reflected in this offering circular, prepare a supplement to this offering circular or publish a new offering circular for use in connection with any subsequent issue of the Notes to be listed and quoted on the SGX-ST.

If the terms of the Program are modified or amended in a manner which would make this offering circular, as so modified or amended, inaccurate or misleading, a new offering circular will be prepared.

AVAILABLE INFORMATION

To permit compliance with Rule 144A under the Securities Act in connection with sales of the Notes, the Issuer will be required under the Amended and Restated Agency Agreement dated December 7, 2012, as supplemented by the First Supplement to the Amended and Restated Agency Agreement, dated March 28, 2014, the Second Supplement to the Amended and Restated Agency Agreement, dated March 15, 2016, the Third Supplement to the Amended and Restated Agency Agreement, dated March 17, 2017 and the Fourth Supplement to the Amended and Restated Agency Agreement, dated April 3, 2020 (as so supplemented, and as may be further amended and/or supplemented and/or restated from time to time, the "**Agency Agreement**") among the Issuer, The Bank of New York Mellon, London Branch, as the fiscal agent (the "**Fiscal Agent**"), and other agents party thereto, to furnish, upon request, to a Holder (as defined in "*Form of the Notes — General*") of a Note and a prospective investor designated by such Holder, the information required to be delivered under Rule 144A(d)(4) under the Securities Act unless at the time of the request the Issuer is a reporting company under Section 13 or Section 15(d) of the United States Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), or the Issuer is exempt from the registration requirements of Section 12(g) of the Exchange Act (and therefore is required to publish on its website, in English, certain information pursuant to Rule 12g3-2(b) under the Exchange Act). In accordance with the Agency Agreement, the Fiscal Agent also will make available for inspection by holders of the Notes or, in certain cases, arrange for the mailing to such holders of the Notes, certain reports or communications received from us. See "*Terms and Conditions of the Notes — Notices*."

Copies of the Agency Agreement are available free of charge from the specified offices of the Fiscal Agent. The Issuer has prepared audited annual consolidated financial statements as of and for the years ended December 31, 2017, 2018 and 2019 which will be available at the office of the Fiscal Agent.

GENERAL DESCRIPTION OF THE PROGRAM

Under the Program, the Issuer may from time to time issue Notes denominated in any currency, subject as set out herein. A summary of the terms and conditions of the Program and the Notes appears below. The applicable terms of any Notes will be agreed between the Issuer and the relevant Dealer prior to the issue of the Notes and will be set out in the "*Terms and Conditions of the Notes*" endorsed on, or incorporated by reference into, the Notes, as modified and supplemented by the applicable Pricing Supplement attached to, or endorsed on, such Notes, as more fully described under "*Form of the Notes*" below.

This offering circular and any supplement will only be valid for the issuance of the Notes in an aggregate nominal amount which, when added to the aggregate nominal amount then outstanding of all Notes previously or simultaneously issued under the Program, does not exceed US$6,000,000,000 or its equivalent in other currencies. For the purpose of calculating the U.S. dollar equivalent of the aggregate nominal amount of Notes issued under the Program from time to time:

(a) the U.S. dollar equivalent of Notes denominated in another Specified Currency (as specified in the applicable Pricing Supplement in relation to the Notes, described under "*Form of the Notes*") shall be determined, at the discretion of the Issuer, either as of the date on which agreement is reached for the issue of Notes or on the preceding day on which commercial banks and foreign exchange markets are open for business in London, in each case on the basis of the spot rate for the sale of the U.S. dollar against the purchase of such Specified Currency in the London foreign exchange market quoted by any leading international bank selected by the Issuer on the relevant day of calculation;

(b) the U.S. dollar equivalent of Dual Currency Notes, Index Linked Notes and Partly Paid Notes (each as specified in the applicable Pricing Supplement in relation to the Notes, described under "*Form of the Notes*") shall be calculated in the manner specified above by reference to the original nominal amount on issue of such Notes (in the case of Partly Paid Notes regardless of the subscription price paid); and

(c) the U.S. dollar equivalent of Zero Coupon Notes (as specified in the applicable Pricing Supplement in relation to the Notes, described under "*Form of the Notes*") and other Notes issued at a discount or premium shall be calculated in the manner specified above by reference to the net proceeds received by the Issuer for the relevant issue.

SUMMARY OF THE PROGRAM

The following summary does not purport to be complete and is taken from, and is qualified in its entirety by, the remainder of this offering circular and, in relation to the terms and conditions of any particular Tranche of Notes, the applicable Pricing Supplement. Words and expressions defined in "Form of the Notes" and "Terms and Conditions of the Notes" below shall have the same meanings in this summary.

Issuer	Shinhan Bank (in relation to each Tranche of Notes, the applicable Pricing Supplement will indicate whether the Issuer is acting through its principal office in Korea or through Shinhan Bank, New York Branch or Shinhan Bank, London Branch) (Legal Entity Identifier: 5493003P813VL21KG928)
Description	Global Medium Term Note Program
Arranger	The Hongkong and Shanghai Banking Corporation Limited
Dealers	Citigroup Global Markets Inc., Crédit Agricole Corporate and Investment Bank, The Hongkong and Shanghai Banking Corporation Limited, J.P. Morgan Securities plc, Merrill Lynch International, and any other Dealers appointed in accordance with the Program Agreement.
Certain Restrictions	Each issue of Notes denominated in a currency in respect of which particular laws, guidelines, regulations, restrictions or reporting requirements apply will only be issued in circumstances which comply with such laws, guidelines, regulations, restrictions or reporting requirements from time to time (see "*Subscription and Sale and Transfer and Selling Restrictions*").
Principal Paying Agent and Fiscal Agent	The Bank of New York Mellon, London Branch
Euroclear/Clearstream Registrar and Euroclear/Clearstream Transfer Agent	The Bank of New York Mellon SA/NV, Luxembourg Branch
Exchange Agent, DTC Paying Agent, DTC Registrar and DTC Transfer Agent	The Bank of New York Mellon
CMU Lodging Agent, CMU Paying Agent, CMU Registrar and CMU Transfer Agent	The Bank of New York Mellon, Hong Kong Branch
Program Size	Up to US$6,000,000,000 (or its equivalent in other currencies calculated as described under "*General Description of the Program*") outstanding at any time. The Issuer may increase the amount of the Program in accordance with the terms of the Program Agreement.

Distribution	Notes may be distributed by way of private or public placement and in each case on a syndicated or non-syndicated basis.
Currencies	Subject to any applicable legal or regulatory restrictions, any currency agreed between the Issuer and the relevant Dealer.
Redenomination	The applicable Pricing Supplement may provide that certain Notes may be redenominated in Euro (to the extent permitted under the applicable Korean laws and regulations). The relevant provisions applicable to any such redenomination are contained in Condition 5.
Maturities	Such maturities as may be agreed between the Issuer and the relevant Dealer, subject to such minimum or maximum maturities as may be allowed or required from time to time by the relevant central bank (or equivalent body) or any laws or regulations applicable to the Issuer or the relevant Specified Currency.
Issue Price	Notes may be issued on a fully-paid or a partly-paid basis and at an issue price which is at par or at a discount to, or premium over, par.
Form of Notes	The Notes will be issued in bearer or registered form as described in "*Form of the Notes*." Registered Notes will not be exchangeable for Bearer Notes and vice versa.
Fixed Rate Notes	Fixed interest will be payable on such date or dates as may be agreed between the Issuer and the relevant Dealer and on redemption and will be calculated on the basis of such Day Count Fraction as may be agreed between the Issuer and the relevant Dealer.
Floating Rate Notes	Floating Rate Notes will bear interest at a rate determined: (i) on the same basis as the floating rate under a notional interest rate swap transaction in the relevant Specified Currency governed by an agreement incorporating the 2006 ISDA Definitions (as published by the International Swaps and Derivatives Association, Inc., and as amended and updated as at the Issue Date of the first Tranche of the Notes of the relevant Series); (ii) on the basis of a reference rate appearing on the agreed screen page of a commercial quotation service; or (iii) on such other basis as may be agreed between the Issuer and the relevant Dealer. The margin (if any) relating to such floating rate will be agreed between the Issuer and the relevant Dealer for each Series of Floating Rate Notes.

	If a Benchmark Transition Event occurs prior to the maturity of any Floating Rate Notes, the method of calculation and rate of interest payable on such notes may change pursuant to Condition 6(b)(vii) of the Terms and Conditions of the Notes.
Index Linked Notes	Payments of principal in respect of Index Linked Redemption Notes or of interest in respect of Index Linked Interest Notes will be calculated by reference to such index and/or formula or to changes in the prices of securities or commodities or to such other factors as the Issuer and the relevant Dealer may agree.
Other Provisions in Relation to Floating Rate Notes and Index Linked Interest Notes	Floating Rate Notes and Index Linked Interest Notes may also have a maximum interest rate, a minimum interest rate or both. Interest on Floating Rate Notes and Index Linked Interest Notes in respect of each Interest Period, as agreed prior to issue by the Issuer and the relevant Dealer, will be payable on such Interest Payment Dates, and will be calculated on the basis of such Day Count Fraction, as may be agreed between the Issuer and the relevant Dealer.
Dual Currency Notes	Payments (whether in respect of principal or interest and whether at maturity or otherwise) in respect of Dual Currency Notes will be made in such currencies, and based on such rates of exchange, as the Issuer and the relevant Dealer may agree.
Zero Coupon Notes	Zero Coupon Notes will be offered and sold at a discount to their nominal amount and will not bear interest other than in case of late payment.
Redemption	The Pricing Supplement relating to each Tranche of Notes will indicate either that the Notes of such Tranche cannot be redeemed prior to their stated maturity (other than in specified installments (see below), if applicable, or for taxation reasons (in the case of Subordinated Notes, only with the prior approval of the FSS or such other relevant regulatory authority in Korea, if necessary) or, in the case of Senior Notes, following an Event of Default or, in the case of Subordinated Notes, following a Bankruptcy Event or a Liquidation Event), or that such Notes will be redeemable at the option of the Issuer (in the case of Subordinated Notes, such redemption shall not be made within 5 years after the issuance date of such Notes, and shall be subject to the prior approval of the FSS) and/or (except in the case of Subordinated Notes) the Noteholders, upon giving not less than 15 nor more than 30 days' irrevocable notice (or such other notice period (if any) as is indicated in the applicable Pricing Supplement) to the Noteholders or the Issuer, as the case may be, on a date or dates specified prior to such stated maturity and at a price or prices and on such terms as are indicated in the applicable Pricing Supplement.

	The applicable Pricing Supplement may provide that Notes may be redeemable in two or more installments of such amounts and on such dates as are indicated in the applicable Pricing Supplement.
Denomination of Notes	Notes will be issued in such denominations as may be agreed between the Issuer and the relevant Dealer except that the minimum denomination of each Note will be such as may be allowed or required from time to time by the relevant central bank (or equivalent body) or any laws or regulations applicable to the relevant Specified Currency. Unless otherwise stated in the applicable Pricing Supplement, the minimum denomination of each Definitive IAI Registered Note (as defined under "*Form of the Notes*") will be US$500,000 or its approximate equivalent in other Specified Currencies.
Taxation	All payments in respect of the Notes will be made without deduction for or on account of withholding taxes imposed by any Tax Jurisdiction (as defined in Condition 10), except as required by applicable law. In the event that any such deduction is made, the Issuer will, except in certain limited circumstances provided in Condition 10, be required to pay additional amounts to cover the amounts so deducted.
Negative Pledge	The terms of the Notes will contain limitations on liens as further described in Condition 4. For the avoidance of doubt, under the Act on Issuance of Covered Bonds, which was enacted on January 14, 2014 and became effective from April 15, 2014 in Korea, the issuance of covered bonds by the Issuer and any arrangement relating to the segregation or "ring-fencing" of any part of the Issuer's property, assets or revenues (whether present or future) for the purpose thereof shall be permitted, *provided* that such covered bonds are issued and such arrangement is entered into, respectively, in compliance with the Act on Issuance of Covered Bonds and that such property, assets and revenues are intended to form a part of the pool of the assets in respect of which a priority of claim in favor of the covered bondholders may be given.
Cross Acceleration	The terms of the Notes will contain a cross—acceleration provision as further described in Condition 12.
Status of the Senior Notes	The Senior Notes and any relative Receipts and Coupons will constitute direct, unconditional, unsubordinated and, subject to the provisions of Condition 4, unsecured obligations of the Issuer and will rank *pari passu* among themselves and will rank at least *pari passu* with all other present and future unsecured (subject to Condition 4) and unsubordinated obligations of the Issuer, save for such as may be preferred by mandatory provisions of applicable law.

Status of the Subordinated Notes	The Subordinated Notes and any relative Receipts and Coupons will constitute direct, unsecured and subordinated obligations of the Issuer which will at all times rank *pari passu* and ratably without any preference among themselves, at least *pari passu* with all other subordinated obligations of the Issuer which do not rank or are not expressed by their terms to rank junior or senior to the Subordinated Notes and in priority to claims of holders of all classes of equity (including holders of preference shares (if any)) of the Issuer. The rights of holder of Subordinated Notes will be subordinated in right of payment in the manner provided in Condition 3(b).
Write-off of the Subordinated Notes upon a Trigger Event.....................	The Subordinated Notes will be subject to Write-off upon the occurrence of a Trigger Event, as provided in Condition 9. See *"Risk Factors — Risks relating to the Notes — The Notes that are Subordinated Notes may be fully written off upon the occurrence of certain trigger events, in which case holders of the Notes will lose all of their investment."*
Listing..	Approval in-principle has been received from the SGX-ST in connection with the Program and application will be made for the listing and quotation of any Notes that may be issued under the Program which are agreed, at or prior to the time of issue thereof, to be so listed and quoted on the SGX-ST. Such permission will be granted when such Notes have been admitted for listing and quotation on the SGX-ST. For so long as any Notes are listed on the SGX-ST and the rules of the SGX-ST so require, such Notes, if traded on the SGX-ST, will be traded in a minimum board lot size of S$200,000 (or its equivalent in foreign currencies). The Notes may also be listed on such other or further stock exchange(s) as may be agreed between the Issuer and the relevant Dealer in relation to each Series. Unlisted Notes may also be issued. The applicable Pricing Supplement will state whether or not the relevant Notes are to be listed and, if so, on which stock exchange(s).
Governing Law...............................	The Notes will be governed by, and construed in accordance with, New York law except for Condition 3(b), which will be governed by, and construed in accordance with, Korean law.
Selling Restrictions..........................	There are restrictions on the offer, sale and transfer of the Notes in the United States, the European Economic Area (including Germany), the United Kingdom, Korea, Japan, Singapore, Hong Kong, People's Republic of China, Canada, Switzerland and such other restrictions as may be required in connection with the offering and sale of a particular Tranche of Notes. See "*Subscription and Sale and Transfer and Selling Restrictions*."

FORM OF THE NOTES

Certain capitalized terms used herein are defined in "*Terms and Conditions of the Notes*."

The Notes of each Series will be in either bearer form, with or without interest coupons attached, or registered form, without interest coupons attached. Bearer Notes will be issued outside the United States in reliance on Regulation S and Registered Notes will be issued both outside the United States in reliance on the exemption from registration provided by Regulation S and within the United States in reliance on Rule 144A or another available exemption from the registration requirements of the Securities Act.

Bearer Notes

Each Tranche of Bearer Notes will be initially issued in the form of either a temporary bearer global note (a "**Temporary Bearer Global Note**") or a permanent bearer global note (a "**Permanent Bearer Global Note**" and, together with Temporary Bearer Global Note, the "**Bearer Global Notes**") as indicated in the applicable Pricing Supplement, which, in either case, will be delivered on or prior to the original issue date of the Tranche to either (i) a common depositary (the "**Common Depositary**") for Euroclear Bank SA/NV ("**Euroclear**") and Clearstream Banking S.A. ("**Clearstream**") or (ii) a sub-custodian for the Hong Kong Monetary Authority ("**HKMA**") as operator of the Central Moneymarkets Unit Service (the "**CMU Service**").

While any Bearer Note is represented by a Temporary Bearer Global Note, payments of principal, interest (if any) and any other amount payable in respect of the Notes due prior to the Exchange Date (as defined below) will be made against presentation of the Temporary Bearer Global Note only to the extent that certification (in a form to be provided) to the effect that the beneficial owners of interests in such Bearer Note are not U.S. persons or persons who have purchased for resale to any U.S. person, as required by U.S. Treasury regulations, has been received by Euroclear and/or Clearstream and/or The Bank of New York Mellon, Hong Kong Branch (the "**CMU Lodging Agent**") and (in the case of a Temporary Bearer Global Note delivered to the Common Depositary for Euroclear and Clearstream) Euroclear and/or Clearstream, as applicable, has given a similar certification (based on the certifications it has received) to the Principal Paying Agent.

On or after the date (the "**Exchange Date**") which is 40 days after a Temporary Bearer Global Note is issued, interests in such Temporary Bearer Global Note will be exchangeable (free of charge and provided that if it is a Partly Paid Note all installments of the subscription monies due before the date of such exchange have been paid) upon request as described therein either for (i) interests in a Permanent Bearer Global Note of the same Series or (ii) for Definitive Bearer Notes of the same Series with, where applicable, receipts, interest coupons and talons attached (as indicated in the applicable Pricing Supplement and subject, in the case of Definitive Bearer Notes, to such notice period as is specified in the applicable Pricing Supplement), in each case against certification of beneficial ownership as required by U.S. Treasury regulations in accordance with the terms of the Temporary Bear Global Note unless such certification has already been given pursuant to the preceding paragraph. Definitive Bearer Notes will only be delivered outside the United States. The CMU Service may require that any such exchange for a Permanent Bearer Global Note is made in whole and not in part and in such event, no such exchange will be effected until all relevant account holders (as set out in a CMU Instrument Position Report (as defined in the rules of the CMU Service) or any other relevant notification supplied to the CMU Lodging Agent by the CMU Service) have so certified. The holder of a Temporary Bearer Global Note will not be entitled to collect any payment of interest, principal or other amount due on or after the Exchange Date unless, upon due certification, exchange of the Temporary Bearer Global Note for an interest in a Permanent Bearer Global Note or for Definitive Bearer Notes is improperly withheld or refused. The Bearer Notes will be subject to certain restrictions on transfer set forth therein or will bear a legend regarding such restrictions.

Payments of principal, interest (if any) or any other amounts on a Permanent Bearer Global Note (if not held through the CMU Service) will be made through Euroclear and/or Clearstream against presentation or surrender (as the case may be) of the Permanent Bearer Global Note without any requirement for certification.

In respect of a Bearer Global Note held through the CMU Service, any payments of principal, interest (if any) or any other amounts shall be made to the person(s) for whose account(s) interests in the relevant Bearer Global Note are credited (as set out in a CMU Instrument Position Report or any other relevant notification supplied to the CMU Lodging Agent by the CMU Service) and save in the case of final payment, no presentation of the relevant Bearer Global Note shall be required for such purpose.

The applicable Pricing Supplement will specify that a Permanent Bearer Global Note will be exchangeable (free of charge), in whole but not in part, for Definitive Bearer Notes with, where applicable, receipts, interest coupons and talons attached upon either (a) not less than 60 days' written notice (i) in the case of Notes held by a Common Depositary for Euroclear and/or Clearstream, from Euroclear and/or Clearstream (acting on the instructions of any holder of an interest in such Permanent Bearer Global Note) to the Principal Paying Agent as described therein and/or (ii) in the case of Notes held through the CMU Service, from the relevant account holders therein to the CMU Lodging Agent as described therein; or (b) only upon the occurrence of an Exchange Event. For these purposes, "**Exchange Event**" means that (i) an Event of Default (as defined in Condition 12 (*Events of Default*)) has occurred and is continuing, (ii) the Issuer has been notified that both Euroclear and Clearstream, and in the case of Notes cleared through the CMU Service, the CMU Service, have been closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or have announced an intention permanently to cease business or have in fact done so and no successor clearing system is available or (iii) the Issuer has or will become subject to adverse tax consequences which would not be suffered if the Notes had been represented by a Permanent Bearer Global Note in definitive form. The Issuer will give prompt notice to Noteholders in accordance with Condition 17 if an Exchange Event occurs. For so long as the Notes are listed on the SGX-ST and the rules of the SGX-ST so require, in the event that a Permanent Bearer Global Note is exchanged for Definitive Bearer Notes, the Issuer will appoint and maintain a Paying Agent in Singapore, where such Definitive Bearer Notes may be presented or surrendered for payment or redemption. In addition, in the event that a Permanent Bearer Global Note is exchanged for Definitive Bearer Notes, an announcement of such exchange will be made by or on behalf of the Issuer through the SGX-ST and such announcement will include all material information with respect to the delivery of the Definitive Bearer Notes, including details of the Paying Agent in Singapore. In the event of the occurrence of an Exchange Event, in the case of Notes held by a Common Depositary for Euroclear and/or Clearstream (acting on the instructions of any holder of an interest in such Permanent Bearer Global Note) and/or, in the case of Notes held through the CMU Service, the relevant account holders therein, may give notice to the Principal Paying Agent or, as the case may be, the CMU Lodging Agent, requesting exchange and, in the event of the occurrence of an Exchange Event as described in (iii) above, the Issuer may also give notice to the Principal Paying Agent or, as the case may be, the CMU Lodging Agent, requesting exchange. Any such exchange shall occur not later than 45 days after the date of receipt of the first relevant notice by the Principal Paying Agent or, as the case may be, the CMU Lodging Agent.

The following legend will appear on all Permanent Bearer Global Notes and all Definitive Bearer Notes which have a maturity of more than 365 days (including unilateral rollovers and extensions) and on all talons, receipts and interest coupons relating to such Notes:

"ANY UNITED STATES PERSON WHO HOLDS THIS OBLIGATION WILL BE SUBJECT TO LIMITATIONS UNDER THE UNITED STATES INCOME TAX LAWS, INCLUDING THE LIMITATIONS PROVIDED IN SECTIONS 165(j) AND 1287(a) OF THE U.S. INTERNAL REVENUE CODE OF 1986, AS AMENDED."

The sections referred to provide that United States holders, with certain exceptions, will not be entitled to deduct any loss on Bearer Notes, receipts or interest coupons and will not be entitled to capital gains treatment of any gain on any sale, disposition, redemption or payment of principal in respect of such Bearer Notes, receipts or interest coupons.

Notes which are represented by a Bearer Global Note will only be transferable in accordance with the rules and procedures for the time being of Euroclear or Clearstream or the CMU Service, as the case may be.

Registered Notes

The Registered Notes of each Tranche offered and sold in reliance on Regulation S, which will be sold to non-U.S. persons outside the United States, will initially be represented by a global note in registered form (a "**Regulation S Global Note**"). Prior to expiry of the distribution compliance period (as defined in Regulation S) applicable to each Tranche of Notes, beneficial interests in a Regulation S Global Note may not be offered or sold to, or for the account or benefit of, a U.S. person except as otherwise provided in Condition 2 (*Exchange and Transfers of Registered Notes*) and may not be held otherwise than through Euroclear or Clearstream or the CMU Service and such Regulation S Global Note will bear a legend regarding such restrictions on transfer.

The Registered Notes of each Tranche may only be offered and sold in the United States or to U.S. persons in private transactions (i) to "qualified institutional buyers" within the meaning of Rule 144A under the Securities Act ("**QIBs**") or (ii) to "accredited investors" (as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act) that are institutions ("**Institutional Accredited Investors**") who agree to purchase the Notes for their own account and not with a view to the distribution thereof. The Registered Notes of each Tranche sold to QIBs will be represented by a global note in registered form ("**Rule 144A Global Note**" and, together with Regulation S Global Note, the "**Registered Global Notes**").

Registered Global Notes will be deposited with either (i) a custodian for, and registered in the name of a nominee of, The Depository Trust Company ("**DTC**") for the accounts of its participants, including Euroclear and Clearstream, (ii) a common depositary for, and registered in the name of a common nominee of, Euroclear and Clearstream or (iii) a sub-custodian for the HKMA as operator of the CMU Service, in each case, as specified in the applicable Pricing Supplement. Persons holding beneficial interests in Registered Global Notes will be entitled or required, as the case may be, under the circumstances described below, to receive physical delivery of definitive Notes in fully registered form. Unless otherwise stated in the applicable Pricing Supplement, the minimum denomination of each Global Note shall be €100,000 or its approximate equivalent in other Specified Currencies.

The Registered Notes of each Tranche sold to Institutional Accredited Investors will be in definitive form, registered in the name of the holder thereof ("**Definitive IAI Registered Notes**"). Unless otherwise set forth in the applicable Pricing Supplement, Definitive IAI Registered Notes will be issued only in minimum denominations of US$500,000 and integral multiples of US$1,000 in excess thereof (or the approximate equivalents in the applicable Specified Currency). Definitive IAI Registered Notes will be subject to the restrictions on transfer set forth therein and will bear the restrictive legend described under "*Subscription and Sale and Transfer and Selling Restrictions*." Institutional Accredited Investors that hold Definitive IAI Registered Notes may not hold such Notes through DTC, Euroclear, Clearstream, Luxembourg or the CMU Service, but transferees acquiring the Notes in transactions exempt from Securities Act registration pursuant to Regulation S or Rule 144 under the Securities Act (if available) may elect to do so upon satisfaction of the requirements applicable to such transfer as described under "*Subscription and Sale and Transfer and Selling*

Restrictions." The Rule 144A Global Note and the Definitive IAI Registered Notes will be subject to certain restrictions on transfer set forth therein and will bear a legend regarding such restrictions.

Payments of principal, interest and any other amount in respect of the Registered Global Notes will, in the absence of provisions to the contrary, be made to the person shown on the Register (as defined in Condition 1 (*Form, Denomination and Title*)) as the registered holder of the Registered Global Notes. None of the Issuer, any Paying Agent or the Registrar will have any responsibility or liability for any aspect of the records relating to or payments or deliveries made on account of beneficial ownership interests in the Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

Payments of principal, interest or any other amount in respect of the Registered Notes in definitive form will, in the absence of provisions to the contrary, be made to the persons shown on the Register on the relevant Record Date (as defined in Condition 7(d) (*Payments — Payments in respect of Registered Notes*)) immediately preceding the due date for payment in the manner provided in that Condition.

Interests in a Registered Global Note will be exchangeable (free of charge), in whole but not in part, for definitive Registered Notes without receipts, interest coupons or talons attached only upon the occurrence of an Exchange Event. For these purposes, "Exchange Event" means that (i) an Event of Default has occurred and is continuing, (ii) in the case of Notes registered in the name of a nominee for DTC, either DTC has notified the Issuer that it is unwilling or unable to continue to act as depository for the Notes and no alternative clearing system is available or DTC has ceased to constitute a clearing agency registered under the Exchange Act, (iii) in the case of Notes registered in the name of a nominee for a common depositary for Euroclear and Clearstream, the Issuer has been notified that both Euroclear and Clearstream have and, in the case of Notes held through the CMU Service, the Issuer has been notified that the CMU Service has, been closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or have announced an intention permanently to cease business or have in fact done so and, in any such case, no successor clearing system is available or (iv) the Issuer has or will become subject to adverse tax consequences which would not be suffered if the Notes had been represented by the Registered Global Note in definitive form. The Issuer will give prompt notice to Noteholders in accordance with Condition 17 if an Exchange Event occurs. For so long as the Notes are listed on the SGX-ST and the rules of the SGX-ST so require, in the event that a Registered Global Note is exchanged for definitive Registered Notes, the Issuer will appoint and maintain a Paying Agent in Singapore, where the definitive Registered Notes may be presented or surrendered for payment or redemption. In addition, in the event that a Registered Global Note is exchanged for definitive Registered Notes, an announcement of such exchange will be made by or on behalf of the Issuer through the SGX-ST and such announcement will include all material information with respect to the delivery of the definitive Registered Notes, including details of the Paying Agent in Singapore. In the event of the occurrence of an Exchange Event, (i) in the case of Notes registered in the name of a nominee for DTC or a nominee for a Common Depositary for Euroclear and/or Clearstream, DTC, Euroclear and/or Clearstream or any person acting on their behalf (acting on the instructions of any holder of an interest in such Registered Global Note) and/or, (ii) in the case of Notes held through the CMU Service, the relevant account holders therein, may give notice to the Registrar or, as the case may be, the CMU Lodging Agent requesting exchange and, in the event of the occurrence of an Exchange Event as described in (iv) above, the Issuer may also give notice to the Registrar or, as the case may be, the CMU Lodging Agent requesting exchange. Any such exchange shall occur not later than 10 days after the date of receipt of the first relevant notice by the Registrar or, as the case may be, the CMU Lodging Agent.

Transfer of Interests

Interests in a Registered Global Note may, subject to compliance with all applicable restrictions, be transferred to a person who wishes to hold such interest in another Registered Global Note or in the form of a Definitive IAI

Registered Note and Definitive IAI Registered Notes may, subject to compliance with all applicable restrictions, be transferred to a person who wishes to hold such Notes in the form of an interest in a Registered Global Note. No beneficial owner of an interest in a Registered Global Note will be able to transfer such interest, except in accordance with the applicable procedures of DTC, Euroclear and Clearstream and the CMU Service, in each case to the extent applicable. Registered Notes are also subject to the restrictions on transfer set forth therein and will bear a legend regarding such restrictions, see "*Subscription and Sale and Transfer and Selling Restrictions*."

CMU Notes

Unless otherwise specified in the applicable Pricing Supplement, CMU Notes will initially be issued in registered form and represented by a global certificate registered in the name of HKMA, in its capacity as operator of the CMU. Certain special provisions apply to such CMU Notes. See "*Book-Entry Clearance Systems — CMU*."

General

Pursuant to the Agency Agreement (as defined in "*Terms and Conditions of the Notes*"), the Principal Paying Agent, the Registrar or the CMU Lodging Agent, as the case may be, shall arrange that, where a further Tranche of Notes is issued which is intended to form a single Series with an existing Tranche of Notes, the Notes of such further Tranche shall be assigned a Common Code and ISIN and, where applicable, a CUSIP, CINS number and/or CMU instrument number which are different from the Common Code, ISIN, CUSIP, CINS and CMU instrument number assigned to Notes of any other Tranche of the same Series until at least the expiry of the distribution compliance period (as defined in Regulation S) applicable to the Notes of such Tranche and, for Notes subject to the certification requirements under U.S. Treasury regulations, until at least the Notes represented by interests in a Temporary Bearer Global Note are exchanged for Notes represented by an interest in a Permanent Bearer Global Note or for Definitive Bearer Notes.

For so long as any of the Notes is represented by a global Note (a "**Global Note**") held on behalf of Euroclear, Clearstream and/or the CMU Service, each person (other than Euroclear, Clearstream or the CMU Service) who is for the time being shown in the records of Euroclear, Clearstream or the CMU Service as the holder of a particular nominal amount of such Notes (in which regard any certificate or other document issued by Euroclear, Clearstream and/or the CMU Service as to the nominal amount of such Notes standing to the account of any person shall be conclusive and binding for all purposes except in the case of manifest error) shall be treated by the Issuer and its agents as the holder of such nominal amount of such Notes for all purposes other than with respect to the payment of principal or interest on such nominal amount of such Notes, for which purpose the bearer of the relevant Bearer Global Note or the registered holder of the relevant Registered Global Note shall be treated by the Issuer and its agents as the holder of such nominal amount of such Notes in accordance with and subject to the terms of the relevant Global Note and the expressions "**Noteholder**", "**holder of Notes**" and "**Holder**" and related expressions shall be construed accordingly. Notwithstanding the above, if a Note (whether in global or definitive form) is held through the CMU Service, any payment that is made in respect of such Note shall be made at the direction of the bearer or the registered holder to the person(s) for whose account(s) interests in such Note are credited as being held through the CMU Service in accordance with the CMU Rules at the relevant time as notified to the CMU Lodging Agent by the CMU Service in a relevant CMU Instrument Position Report or any other relevant notification by the CMU Service (which notification, in either case, shall be conclusive evidence of the records of the CMU Service as to the identity of any accountholder and the principal amount of any Note credited to its account, save in the case of manifest error) and such payments shall discharge the obligation of the Issuer in respect of that payment under such Note.

So long as DTC or its nominee is the registered owner or holder of a Registered Global Note, DTC or such nominee, as the case may be, will be considered the sole owner or holder of the Notes represented by such

Registered Global Note for all purposes under the Agency Agreement and such Notes except to the extent that in accordance with DTC's published rules and procedures any ownership rights may be exercised by its participants or beneficial owners through participants.

Any reference herein to Euroclear and/or Clearstream and/or DTC and/or the CMU Service shall, whenever the context so permits, be deemed to include a reference to any additional or alternative clearing system specified in the applicable Pricing Supplement.

A Note may be accelerated by the holder thereof in certain circumstances described in Condition 12 (*Events of Default*). In such circumstances, where any Note is still represented by a Global Note and the Global Note (or any part thereof) has become due and repayable in accordance with the Terms and Conditions of such Notes and payment in full of the amount due has not been made in accordance with the provisions of the Global Note then holders of interests in such Global Note credited to their accounts with Euroclear, Clearstream, the CMU Service or DTC, as the case may be, may require Euroclear, Clearstream, the CMU Service or DTC, as applicable, to deliver Definitive Notes in registered form in exchange for their interest in such Global Note in accordance with the standard operating procedures of Euroclear, Clearstream, the CMU Service or DTC, as applicable.

For so long as the Notes are listed on the SGX-ST and the rules of the SGX-ST so require, in the event that a Global Note is exchanged for definitive Notes, the Issuer will appoint and maintain a Paying Agent in Singapore, where such definitive Notes may be presented or surrendered for payment or redemption. In addition, in the event that a Global Note is exchanged for definitive Notes, an announcement of such exchange will be made by or on behalf of the Issuer through the SGX-ST and such announcement will include all material information with respect to the delivery of the definitive Notes, including details of the Paying Agent in Singapore.

Form of Applicable Pricing Supplement

Set out below is the form of Pricing Supplement which will be completed for each Tranche of Notes issued under the Program.

[MIFID II PRODUCT GOVERNANCE – Solely for the purposes of [the/each] manufacturer's product approval process, the target market assessment in respect of the Notes has led to the conclusion that: (i) the target market for the Notes is eligible counterparties and professional clients only, each as defined in Directive 2014/65/EU (as amended, "MiFID II"); and (ii) all channels for distribution of the Notes to eligible counterparties and professional clients are appropriate. Any person subsequently offering, selling or recommending the Notes (a "distributor") should take into consideration the manufacturer['s/s'] target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the manufacturer['s/s'] target market assessment) and determining the appropriate distribution channels.]

[PROHIBITION OF SALES TO EEA AND UK RETAIL INVESTORS – The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area ("EEA") or in the United Kingdom (UK"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of MiFID II; (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended, "IDD"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Regulation (EU) 2017/1129 (as amended, the "Prospectus Regulation"). Consequently no key information document required by Regulation (EU) No 1286/2014 (as amended, the "PRIIPs Regulation") for offering or selling the Notes or otherwise making them available to retail investors in the EEA or in the UK has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA or in the UK may be unlawful under the PRIIPs Regulation.]

[NOTIFICATION UNDER SECTION 309B(1)(C) OF THE SECURITIES AND FUTURES ACT, CHAPTER 289 OF SINGAPORE (THE "SFA") – the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes are [prescribed capital markets products [OR] capital markets products other than prescribed capital markets products] (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and [Excluded Investment Products [OR] Specified Investment Products] (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).]

[Date]

Shinhan Bank

Issue of [Aggregate Nominal Amount of Tranche] [Title of Notes]
under the US$6,000,000,000
Global Medium Term Note Program

This document constitutes the Pricing Supplement relating to the issue of Notes described herein. Terms used herein shall be deemed to be defined as such for the purposes of the Terms and Conditions of the Notes (the "**Conditions**") set forth in the offering circular dated [date], as amended from time to time. This Pricing Supplement is supplemental to and must be read in conjunction with such offering circular.

[The following alternative language applies if the first tranche of an issue which is being increased was issued under an offering circular with an earlier date.

Terms used herein shall be deemed to be defined as such for the purposes of the Terms and Conditions of the Notes (the "**Conditions**") set forth in the offering circular dated [original date]. The Pricing Supplement contains the final terms of the Notes and must be read in conjunction with the offering circular dated [date], except in respect of the Conditions which are extracted from the offering circular dated [original date] and are attached hereto.]

[Include whichever of the following apply or specify as "Not Applicable." Note that the numbering should remain as set out below, even if "Not Applicable" is indicated for individual paragraphs or subparagraphs.]

1.	Issuer:	Shinhan Bank, acting through its [principal office in Korea/ [London/New York*] Branch] (Legal Entity Identifier: 5493003P813VL21KG928)
2.	(i) Series Number:	[●]
	(ii) Tranche Number:	[●] *(if re-opening fungible with an existing Series, details of that Series, including the date on which the Notes become fungible)*
	(iii) Re-opening:	[Yes/No] *[Specify terms of initial or eventual fungibility]*
3.	Specified Currency or Currencies†:	[●]
4.	Aggregate Nominal Amount:	
	(i) Series:	[●]
	(ii) Tranche:	[●]
5.	(i) Issue Price of Tranche:	[●]% of the Aggregate Nominal Amount *[plus accrued interest from [insert date] (in the case of fungible re-opening issues only, if applicable)]*
	(ii) Net Proceeds:	[●]
	(Required only for listed issues)	[●]
	(iii) Use of Proceeds:	[●]
6.	(i) Specified Denominations:	*(N.B. In the case of Registered Notes, this means the minimum integral amount in which transfers can be made. For Registered Global Notes, consider including language substantially to the following effect (however, appropriate amendments should be made for different currencies)* *"[US$200,000] / [€100,000] and integral multiples of [US$1,000] / [€1,000] in excess thereof")*

* For a Note issuance by Shinhan Bank, acting through its New York Branch, U.S. tax implications should be considered.

† In respect of Notes denominated in Renminbi, purchasers of Notes should note that Renminbi is not freely convertible at present. All payments in respect of such Notes shall be made solely by transfer to a Renminbi account maintained by or on behalf of the Noteholder with a bank in Hong Kong in accordance with applicable laws and regulations. The Issuer cannot be required to make payment by any other means (including in any other currency or in bank notes, by transfer to a bank account in the People's Republic of China). "Renminbi Currency Event" may be specified, in which case Condition 7(h) (Payments — Renminbi Currency Event) shall be applicable.

		(N.B. For Bearer Notes with a Specified Denomination and higher integral multiples above the minimum denomination, consider including language substantially to the following effect (however, appropriate amendments should be made for different currencies): *("[US$200,000] / [€100,000] and integral multiples of [US$1,000] / [€1,000] in excess thereof, up to and including [US$399,000] / [€199,000] and, for so long as the Notes are represented by a Global Note (as defined below) and Euroclear and Clearstream so permit, the Notes shall be tradable only in the minimum authorized denomination of [US$200,000] / [€100,000] and higher integral multiples of [US$1,000] [€1,000], notwithstanding that no definitive notes will be issued with a denomination above [US$399,000]/ [€199,000].")*
	(ii) Calculation Amount:	[●] *(If there is only one Specified Denomination, insert the Specified Denomination. If there is more than one Specified Denomination, insert the highest common factor. N.B. there must be a common factor in the case of two or more Specified Denominations)*
7.	(i) Issue Date:	[●]
	(ii) Interest Commencement Date:	[●]
8.	Maturity Date:	*[Fixed rate — specify date/Floating rate —* Interest Payment Date falling in or nearest to *[specify month and year]]* *(NB: Subordinated Notes shall have a minimum maturity of five years)*
9.	Interest Basis:	[[●]% Fixed Rate] [[LIBOR/EURIBOR/HIBOR] +/- [●]% Floating Rate] [Zero Coupon] [Index Linked Interest] [Dual Currency Interest] *[specify other]* (further particulars specified below)
10.	Redemption/Payment Basis:	[Redemption at par] [Index Linked Redemption] [Dual Currency Redemption] [Partly Paid] [Installment] *[specify other]*
11.	Change of Interest Basis or Redemption/ Payment Basis:	*[Specify details of any provisions for change of Notes into another Interest Basis or Redemption/ Payment Basis]*
12.	Put/Call Options:	[Investor Put] [Issuer Call] [(further particulars specified below)] *[N.B.: Investor Put not possible for Subordinated Notes; Issuer Call for Subordinated Notes may not be made within five years*

		of their issuance date and will be subject to satisfaction of regulatory conditions.]
13.	Status of the Notes:	[Senior/Subordinated][‡]
14.	Listing:	[Singapore Exchange Securities Trading Limited/ *specify other*/None]
15.	Method of Distribution:	[Syndicated/Non-syndicated]

PROVISIONS RELATING TO INTEREST (IF ANY) PAYABLE

16.	Fixed Rate Note Provisions:	[Applicable/Not Applicable] *(If not applicable, delete the remaining subparagraphs of this paragraph)*
(i)	Rate(s) of Interest:	[●]% per annum [payable [annually/ semi-annually/quarterly] in arrears] *(If payable other than annually, consider amending Condition 6 (Interest))*
(ii)	Interest Payment Date(s):	([[●] in each year up to and including the Maturity Date]/ *[specify other]*) *(N.B.: This will need to be amended in the case of long or short coupons)*
(iii)	Fixed Coupon Amount(s): *(applicable to Notes in definitive form)*	[[●] per Calculation Amount] / [As per Condition 6(a)(II)]
(iv)	Broken Amount(s): *(applicable to Notes in definitive form)*	[[●] per Calculation Amount payable on the Interest Payment Date falling [in/on] [●]]/ [As per Condition 6(a)(II)] *[Insert particulars of any initial or final broken interest amounts which do not correspond with the Fixed Coupon Amount]*
(v)	Day Count Fraction:	[30/360 or Actual/Actual (ICMA)/*specify other*] / [Not Applicable][§]
(vi)	Determination Date(s):	[●] in each year *[Insert regular interest payment dates, ignoring issue date or maturity date in the case of a long or short first or last coupon. N.B.: This will need to be amended in the case of regular interest payment dates which are not of equal duration. N.B.: Only relevant where Day Count Fraction is Actual/ Actual (ICMA)]*
(vii)	Business Center(s):	[Hong Kong or [ ]][**] [Not Applicable]
(viii)	Other terms relating to the method of calculating interest for Fixed Rate Notes:	[Condition 6(a)(I) applies/Condition 6(a)(II) applies. The Principal Paying Agent will act as the Calculation Agent. / None/*give details*]

‡ *Eligibility of Subordinated Notes in Korea or UK, US or any other jurisdiction where the foreign branch through which the Notes are being issued is located, the inclusion of a substitution or amendment provision which would permit the Issuer to make such changes to the terms as are necessary to reflect the eventual bail-in rules without the need for the consent of the Noteholders, should be considered.*

§ *Applicable if Condition 6(a)(I) is specified as being applicable in paragraph 16(viii).*

** *Applicable if Condition 6(a)(II) is specified as being applicable in paragraph 16(viii).*

17. Floating Rate Note Provisions:	[Applicable/Not Applicable] *(If not applicable, delete the remaining subparagraphs of this paragraph)*
(i) Specified Period(s)/Specified Interest Payment Dates:	[●]
(ii) Business Day Convention:	[Floating Rate Convention/Following Business Day Convention/ Modified Following Business Day Convention/ Preceding Business Day Convention/*[specify other]*]
(iii) Additional Business Center(s):	[●] *[(Insert New York City for U.S. dollar denominated Notes to be held through DTC and for non-U.S. dollar denominated Notes where exchange into U.S. dollars is contemplated for DTC participants holding through Euroclear and Clearstream)]*
(iv) Manner in which the Rate of Interest and Interest Amount are to be determined:	[Screen Rate Determination/ISDA Determination/*specify other*]
(v) Party responsible for calculating the Rate of Interest and Interest Amount (if not the Agent):	[●]
(vi) Screen Rate Determination:	
— Reference Rate:	[●] *(Either LIBOR, EURIBOR, HIBOR or other, although additional information is required if other — including fall back provisions in the Agency Agreement)*
— Interest Determination Date(s):	[●] *(Second London business day prior to the start of each Interest Period if LIBOR (other than Sterling or Euro LIBOR), first day of each Interest Period if Sterling LIBOR or Hong Kong dollar HIBOR and the second day on which the TARGET 2 System is open prior to the start of each Interest Period if EURIBOR or Euro LIBOR)*
— Relevant Screen Page:	[●] *(In the case of EURIBOR, if not Reuters Page EURIBOR 01 ensure it is a page which shows a composite rate or amend the fallback provisions appropriately)*
(vii) ISDA Determination:	
— Floating Rate Option:	[●] *(If not on the same basis as the floating rate under a notional interest rate swap transaction in the relevant Specified Currency governed by an agreement incorporating the 2006 ISDA Definitions, the Issuer shall describe the basis here)*
— Designated Maturity:	[●]
— Reset Date:	[●]
(viii) Margin(s):	[+/-] [●]% per annum
(ix) Minimum Rate of Interest:	[●]% per annum
(x) Maximum Rate of Interest:	[●]% per annum

	(xi) Day Count Fraction:	[●]% per annum [Actual/365 Actual/365 (Fixed) Actual/365 (Sterling) Actual/360 30/360 30E/360 30E/360 [ISDA] Other] (See Condition 6 (*Interest*) for alternatives)
	(xii) Fall back provisions, rounding provisions and any other terms relating to the method of calculating interest on Floating Rate Notes, if different from those set out in the Conditions:	[●]
18.	Zero Coupon Note Provisions:	[Applicable/Not Applicable] *(If not applicable, delete the remaining subparagraphs of this paragraph)*
	(i) Accrual Yield:	[●]% per annum
	(ii) Reference Price:	[●]
	(iii) Any other formula/basis of determining amount payable:	[●]
	(iv) Day Count Fraction in relation to Early Redemption Amounts and late payment:	[Conditions 8(e) (*Redemption and Purchase — Early Redemption Amounts*) — *(iii)* and Condition 8(j) (*Redemption and Purchase — Late Payment on Zero Coupon Notes*)] (*Consider applicable day count fraction if non-U.S. dollar denominated*)
19.	Index Linked Interest Note Provisions:	[Applicable/Not Applicable] *(If not applicable, delete the remaining subparagraphs of this paragraph)*
	(i) Index/Formula:	*[give or annex details]*
	(ii) Calculation Agent responsible for calculating the principal and/or interest due:	[●]
	(iii) Provisions for determining coupon where calculation by reference to Index and/or Formula is impossible or impracticable:	[●]
	(iv) Specified Period(s)/Specified Interest Payment Dates:	[●]
	(v) Business Day Convention:	[Floating Rate Convention/Following Business Day Convention/Modified Following Business Day Convention/ Preceding Business Day Convention/specify other]
	(vi)Additional Business Center(s):	[●]

	(vii) Minimum Rate of Interest:	[●]% per annum
	(viii) Maximum Rate of Interest:	[●]% per annum
	(ix) Day Count Fraction:	[●]
20.	DualCurrency Note Provisions:	[Applicable/Not Applicable] *(If not applicable, delete the remaining subparagraphs of this paragraph)*
	(i) Rate of Exchange/method of calculating Rate of Exchange:	[●] *[give details]*
	(ii) Calculation Agent, if any, responsible for calculating the principal and/or interest payable:	[●]
	(iii) Provisions applicable where calculation by reference to Rate of Exchange impossible or impracticable:	[●]
	(iv) Person at whose option Specified Currency(ies) is/are payable:	[●]

PROVISIONS RELATING TO REDEMPTION

21.	Issuer Call:	[Applicable/Not Applicable] *(If not applicable, delete the remaining subparagraphs of this paragraph)*
	(i) Optional Redemption Date(s):	[●] *(N.B.: Issuer Call for Subordinated Notes may not be made within five years of their issuance date and will be subject to satisfaction of regulatory conditions.)*
	(ii) Optional Redemption Amount of each Note and method, if any, of calculation of such amount(s):	[●] per Calculation Amount
	(iii) If redeemable in part:	
	(a) Minimum Redemption Amount:	[●]
	(b) Maximum Redemption Amount:	[●]
	(iv) Notice period (if other than as set out in the Conditions):	[●] *(N.B. If setting notice periods which are different from those provided in the Conditions, the Issuer is advised to consider the practicalities of distribution of information through intermediaries, for example, clearing systems and custodians, as well as any other notice requirements which may apply, for example, as between the Issuer and the Agent)*
22.	Investor Put:	[Applicable/Not Applicable] *(If not applicable, delete the remaining subparagraphs of this paragraph)*
	(i) Optional Redemption Date(s):	[●]

(ii) Optional Redemption Amount of each Note and method, if any, of calculation of such amount(s):	[●] per Calculation Amount
(iii) Notice period (if other than as set out in the Conditions):	[●] *(N.B. If setting notice periods which are different from those provided in the Conditions, the Issuer is advised to consider the practicalities of distribution of information through intermediaries, for example, clearing systems and custodians, as well as any other notice requirements which may apply, for example, as between the Issuer and the Agent)*
23. Final Redemption Amount of each Note:	[●] [per Calculation Amount/specify other]
24. Early Redemption Amount of each Note payable on redemption for taxation reasons or on event of default and/or the method of calculating the same (if required or if different from that set out in Condition 8(e) (*Redemption and Purchase — Early Redemption Amounts*):	[●] [per Calculation Amount/specify other]

GENERAL PROVISIONS APPLICABLE TO THE NOTES

25. Form of Notes:	[Bearer Notes: [Temporary Bearer Global Note exchangeable for a Permanent Bearer Global Note which is exchangeable for Definitive Notes [either (a) not less than 60 days' written notice (i) in the case of Notes held by a Common Depositary for Euroclear and/or Clearstream, from Euroclear and/or Clearstream (acting on the instructions of any holder of an interest in such Permanent Bearer Global Note) to the Principal Paying Agent as described therein and/or (ii) in the case of Notes held through the CMU Service, from the relevant account holders therein to the CMU Lodging Agent as described therein; or (b) only upon the occurrence of an Exchange Event]††] [Temporary Bearer Global Note exchangeable for Definitive Notes on and after the Exchange Date] [Permanent Bearer Global Note exchangeable for Definitive Notes [either (a) not less than 60 days' written notice (i) in the case of Notes held by a Common Depositary for Euroclear and/or Clearstream, from Euroclear and/or Clearstream (acting on the instructions of any holder of an interest in such Permanent Bearer Global Note) to the

†† *N.B. — Regard should be given to the specific requirements of the relevant clearing system(s), if any.*
Ensure that this is consistent with the wording in the "Form of the Notes" section in the offering circular and the Notes themselves. The exchange upon notice, any time options should not be expressed to be applicable if the Specified Denomination of the Notes in paragraph 6 above includes language substantially to the following effect: "€100,000 and integral multiples of €1,000 in excess thereof up to and including €199,000". Furthermore, such Specified Denomination construction is not permitted in relation to any issuance of Notes which is to be represented on issue by a Temporary Bearer Global Notes exchangeable for Definitive Notes.

		Principal Paying Agent as described therein and/or (ii) in the case of Notes held through the CMU Service, from the relevant account holders therein to the CMU Lodging Agent as described therein; or (b) only upon the occurrence of an Exchange Event]‡‡]]
		[Registered Notes:
		Regulation S Global Note (US$[●] nominal amount) [registered in the name of a nominee for DTC/a common depositary for Euroclear and Clearstream/held through the CMU Service]/Rule 144A Global Note (US$[●] nominal amount registered in the name of a nominee for [DTC/a common depositary for Euroclear and Clearstream/held through the CMU Service]/Definitive IAI Registered Notes (*specify nominal amounts*)]
26.	Additional Financial Center(s) or other special provisions relating to Payment Dates:	[Not Applicable/*give details*] *(Note that this item relates to the place of payment and not Interest Period end dates to which items 17(iii) and 19(vi) relate; insert New York City for U.S. dollar denominated Notes to be held through DTC)*
27.	Talons for future Coupons or Receipts to be attached to Definitive Bearer Notes (and dates on which such Talons mature):	[Not Applicable/*give details*]
28.	Details relating to Partly Paid Notes: amount of each payment comprising the Issue Price and date on which each payment is to be made and consequences of failure to pay, including any right of the Issuer to forfeit the Notes and interest due on late payment:	[Not Applicable/*give details*] [New forms of Global Note may be required for Partly Paid issues]
29.	Details relating to Installment Notes:	[Not Applicable/*give details*]
	(i) Installment Amount(s):	[Not Applicable/*give details*]
	(ii) Installment Date(s):	[Not Applicable/*give details*]
30.	Redenomination applicable:	Redenomination [not] applicable *[(If Redenomination is applicable, specify the applicable Day Count Fraction and any provisions necessary to deal with floating rate interest calculation (including alternative reference rates)]*
31.	Other terms or special conditions:	[Not Applicable/*give details*]

DISTRIBUTION

32.	(i) If syndicated, names of Managers:	[Not Applicable/*give names*]
	(ii) Stabilizing Manager (if any):	[Not Applicable/*give name*]

‡‡ *N.B. — Regard should be given to the specific requirements of the relevant clearing system(s), if any.*
Ensure that this is consistent with the wording in the "Form of the Notes" section in the offering circular and the Notes themselves. The exchange upon notice, options should not be expressed to be applicable if the Specified Denomination of the Notes in paragraph 6 above includes language substantially to the following effect: "€100,000 and integral multiples of €1,000 in excess thereof up to and including €199,000". Furthermore, such Specified Denomination construction is not permitted in relation to any issuance of Notes which is to be represented on issue by a Temporary Bearer Global Notes exchangeable for Definitive Notes.

33.	If non-syndicated, name of relevant Dealer:	[●]
34.	Whether TEFRA D or TEFRA C rules applicable or TEFRA rules not applicable:	[TEFRA D/TEFRA C/TEFRA not applicable (for Bearer Notes with a maturity of one year or less (including unilateral rollovers and extensions) or Registered Notes)]
35.	Prohibition of Sales to EEA and UK Retail Investors:	[Not Applicable/Applicable]
36.	Additional selling restrictions:	[Not Applicable/*give details*]

OPERATIONAL INFORMATION

37.	Any clearing system(s) other than Euroclear and Clearstream and the relevant identification number(s):	[CMU Service/not Applicable/*give name(s) and number(s)*]
38.	Delivery:	Delivery [against/free of] payment
39.	In the case of Registered Notes, specify the location of the office of the Registrar if other than New York:	[Not Applicable/Luxembourg/Hong Kong]
40.	In the case of Bearer Notes, specify the location of the office of the Principal Paying Agent if other than London:	[Not Applicable/Hong Kong]
41.	Additional Paying Agent(s) (if any):	[●]
42.	Alternate Settlement Rate Determination Agent (if any):	[●]

ISIN:	[●]
Common Code:	[●]
CUSIP:	[●]
CINS:	[●]
(insert here any other relevant codes such as a CMU instrument number)	

[LISTING APPLICATION

This Pricing Supplement comprises the details required to list the issue of Notes described herein pursuant to the listing of the US$6,000,000,000 Global Medium Term Note Program of Shinhan Bank.

The Singapore Exchange Securities Trading Limited (the "**SGX-ST**") assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained herein. Approval in-principle from, admission to the Official List of, and listing and quotation of the Notes on, the SGX-ST are not to be taken as an indication of the merits of the Issuer, the Program or the Notes.][§§]

§§ *If the Issuer issues green/social/sustainability notes under the Program and the use of proceeds references a framework (e.g., the "Shinhan Bank Sustainable Development Goals Bond Framework"), the framework is required to be incorporated into the pricing supplement (if not already included in the offering circular) in order for such notes to be listed on the SGX-ST.*

***RESPONSIBILITY**

The Issuer accepts responsibility for the information contained in this Pricing Supplement. Signed on behalf of the Issuer:

By: ____

Duly authorized signatory
Name:
Title:

If the applicable Pricing Supplement specifies any modification to the Terms and Conditions of the Notes as described herein, it is envisaged that, to the extent that such modification relates only to Conditions 1 (*Form, Denomination and Title*), 5 (*Redenomination*), 6 (*Interest*), 7 (*Payments*), 8 (*Redemption and Purchase* (except Condition 8(b) (*Redemption and Purchase — Redemption for Tax Reasons*)), 14 (*Replacement of Notes, Receipts, Coupons and Talons*), 15 (*Agents*), 16 (*Exchange of Talons*), 17 (*Notices*) (insofar as such Notes are not listed or admitted to trade on any stock exchange) or 19 (*Further Issues*), they will not necessitate the preparation of a supplement to this offering circular. If the Terms and Conditions of the Notes of any Series are to be modified in any other respect, a supplement to this offering circular will be prepared, if appropriate.

TERMS AND CONDITIONS OF THE NOTES

The following are the Terms and Conditions of the Notes to be issued by the Issuer which will be incorporated by reference into each Global Note and each definitive Note, in the latter case only if permitted by the relevant stock exchange (if any) and agreed by the Issuer and the relevant Dealer at the time of issue but if not so permitted and agreed, such definitive Note will have endorsed thereon or attached thereto such Terms and Conditions. The applicable Pricing Supplement in relation to any Tranche of Notes may specify other terms and conditions which shall to the extent so specified or to the extent inconsistent with the following Terms and Conditions, replace or modify the following Terms and Conditions for the purpose of such Notes. The applicable Pricing Supplement (or the relevant provisions thereof) will be endorsed upon, or attached to, each Global Note and definitive Note. Reference should be made to "Form of the Notes" above for a description of the content of Pricing Supplements which will include the definitions of certain terms used in the following Terms and Conditions or specify which of such terms are to apply in relation to the relevant Notes.

This Note is one of a Series (as defined below) of Notes issued by Shinhan Bank (the "**Issuer**"). References herein to the "**Notes**" shall be references to the Notes of this Series and shall mean (i) in relation to any Notes represented by a global note (a "**Global Note**"), units of the lowest Specified Denomination in the Specified Currency, (ii) any Global Note in bearer form (each a "**Bearer Global Note**"); (iii) any Global Notes in registered form (each a "**Registered Global Note**"), (iv) any definitive Notes in bearer form ("**Definitive Bearer Notes**" and, together with the Bearer Global Notes, the "**Bearer Notes**")) issued in exchange (or part exchange) for a Global Note in bearer form and (v) any definitive Notes in registered form ("**Definitive Registered Notes**" and, together with Registered Global Notes, "**Registered Notes**") (whether or not issued in exchange for a Global Note in registered form). The Notes, the Receipts (as defined below) and the Coupons (as defined below) have the benefit of an Amended and Restated Agency Agreement dated December 7, 2012, as supplemented by the First Supplement to the Amended and Restated Agency Agreement, dated March 28, 2014, the Second Supplement to the Amended and Restated Agency Agreement, dated March 15, 2016, the Third Supplement to the Amended and Restated Agency Agreement, dated March 17, 2017 and the Fourth Supplement to the Amended and Restated Agency Agreement, dated April 3, 2020 (as so supplemented, and as may be further modified and/or supplemented and/or restated from time to time, the "**Agency Agreement**"), and made among the Issuer, The Bank of New York Mellon, London Branch as fiscal agent (the "**Fiscal Agent**"), principal paying agent (the "**Principal Paying Agent**") and calculation agent (the "**Calculation Agent**"), The Bank of New York Mellon SA/NV, Luxembourg Branch as Euroclear/Clearstream transfer agent (the "**Euroclear/Clearstream Transfer Agent**") and Euroclear/Clearstream registrar (the "**Euroclear/Clearstream Registrar**"), in each case, with respect to Notes to be held in and/or cleared through Euroclear or Clearstream (each as defined below), The Bank of New York Mellon as exchange agent (the "**Exchange Agent**"), DTC paying agent (the "**DTC Paying Agent**"), DTC transfer agent (the "**DTC Transfer Agent**") and DTC registrar (the "**DTC Registrar**"), in each case, with respect to Notes to be held in and/or cleared through the DTC (as defined below), and The Bank of New York Mellon, Hong Kong Branch as CMU lodging agent (the "**CMU Lodging Agent**"), CMU paying agent (the "**CMU Paying Agent**"), CMU registrar (the "**CMU Registrar**") and CMU transfer agent (the "**CMU Transfer Agent**"), in each case, with respect to Notes to be held in and/or cleared through the CMU Service (as defined below). The Principal Paying Agent, the DTC Paying Agent, the CMU Paying Agent and other paying agents appointed under the Agency Agreement are referred to as "**Paying Agents**", and any of them, as "**Paying Agent**". The Euroclear/Clearstream Transfer Agent, the DTC Transfer Agent and the CMU Transfer Agent and other transfer agents appointed under the Agency Agreement are referred to as "**Transfer Agents**", and any of them as "**Transfer Agent**". The Euroclear/Clearstream Registrar, the DTC Registrar and the CMU Registrar are referred to as the "**Registrars**", and any of them, as "**Registrar**". The references herein to Fiscal Agent, Calculation Agent, Exchange Agent, Registrar, Paying Agent, Transfer Agent and CMU Lodging Agent (each, an "**Agent**"), shall include any respective successor thereof, and the references herein to Paying Agents, Registrars and Transfer Agents shall include any respective additional agents or successors thereto. For purposes of these Terms and Conditions, all references to the Registrar or the Transfer Agent shall, with respect to a Series of Notes to be held in and/or cleared through Euroclear or Clearstream, be deemed to be a reference to The Bank of New York Mellon SA/NV, Luxembourg Branch in its capacity as Euroclear/Clearstream Registrar or Euroclear/Clearstream Transfer Agent, as applicable, and all references to the Paying Agent, the Registrar or the Transfer Agent shall, (i) with respect to a Series of Notes to be held in and/or cleared through DTC, be deemed to be a reference to The Bank of New York Mellon in its capacity as DTC Paying Agent, DTC Registrar or DTC Transfer Agent, as applicable, and (ii) with respect to a Series of Notes to be held in and/or cleared through the CMU Service, be deemed to be a reference to The Bank of New York Mellon, Hong Kong Branch in its capacity as CMU Paying Agent, CMU Registrar or CMU Transfer Agent, as applicable, and all such references shall be construed accordingly.

Interest-bearing Definitive Bearer Notes (unless otherwise indicated in the applicable Pricing Supplement) have interest coupons ("**Coupons**") and, if indicated in the applicable Pricing Supplement, talons for further Coupons ("**Talons**") attached on issue. Any reference herein to Coupons or coupons shall, unless the context otherwise requires, be deemed to include a reference to Talons. Definitive Bearer Notes repayable in installments have receipts ("**Receipts**") for the payment of the installments of principal (other than the final installment) attached on issue. Definitive Registered Notes do not have Receipts, Coupons or Talons attached on issue.

The Pricing Supplement for this Note (or the relevant provisions thereof) is attached to or endorsed on this Note and supplements these Terms and Conditions and may specify other terms and conditions which shall, to the extent so specified or to the extent inconsistent with these Terms and Conditions, replace or modify these Terms and Conditions for the purposes of this Note. References herein to the "**applicable Pricing Supplement**" are to the Pricing Supplement (or the relevant provisions thereof) attached to or endorsed on this Note.

Any reference to "**Noteholders**" or "**holders**" in relation to any Notes shall mean (in the case of Bearer Notes) the holders of the Notes and (in the case of Registered Notes) the persons in whose name the Notes are registered, and shall, in relation to any Notes represented by a Global Note, be construed as provided below. Any reference herein to "**Receiptholders**" shall mean the holders of the Receipts and any reference herein to "**Couponholders**" shall mean the holders of any Coupons, and shall, unless the context otherwise requires, include the holders of the Talons.

As used herein, "**Tranche**" means Notes which are identical in all respects (including as to listing) and "**Series**" means a Tranche of Notes together with any further Tranche or Tranches of Notes which are (i) expressed to be consolidated and form a single series and (ii) identical in all respects (including as to listing) except for their respective Issue Dates, Interest Commencement Dates (if applicable) and/or Issue Prices (if applicable).

Copies of the Agency Agreement and the Pricing Supplement applicable to this Note are available for inspection during normal business hours at the specified office of each of the Paying Agents (in the case of all Notes) and the Transfer Agents (in the case of Registered Notes only) except that, if this Note is an unlisted Note of any Series, the applicable Pricing Supplement will only be available for inspection by a Noteholder holding one or more unlisted Notes of that Series and such Noteholder must produce evidence satisfactory to the relevant Paying Agent or Transfer Agent, as the case may be, as to its holding of Notes and as to identity. The Noteholders, the Receiptholders and the Couponholders are deemed to have notice of, and are entitled to the benefit of, all the provisions of the Agency Agreement and the applicable Pricing Supplement which are applicable to them. The statements in these Terms and Conditions include summaries of, and are subject to, the detailed provisions of the Agency Agreement.

Words and expressions defined in the Agency Agreement or used in the applicable Pricing Supplement shall have the same meanings where used in these Terms and Conditions unless the context otherwise requires or unless otherwise stated and *provided that*, in the event of inconsistency between the Agency Agreement and the applicable Pricing Supplement or between these Terms and Conditions and the applicable Pricing Supplement, the applicable Pricing Supplement will prevail.

1. Form, Denomination and Title

The Notes are issued in bearer form or in registered form and, in the case of definitive Notes, will be serially numbered, in the Specified Currency and the Specified Denomination(s). Except as provided in Condition 2, Notes of one Specified Denomination may not be exchanged for Notes of another Specified Denomination and Bearer Notes may not be exchanged for Registered Notes and vice versa.

This Note may be a Fixed Rate Note, a Floating Rate Note, a Zero Coupon Note, an Index Linked Interest Note, a Dual Currency Interest Note or a combination of any of the foregoing, depending upon the Interest Basis shown in the applicable Pricing Supplement

This Note may be an Index Linked Redemption Note, an Installment Note, a Dual Currency Redemption Note, a Partly Paid Note or a combination of any of the foregoing, depending upon the Redemption/Payment Basis shown in the applicable Pricing Supplement.

Definitive Bearer Notes are issued with Coupons attached and, if applicable, Talons and Receipts attached, unless they are Zero Coupon Notes, in which case reference to Coupons and Couponholders in these Terms and Conditions are not applicable. If a definitive Bearer Note is redeemable in installments, it will be issued with receipts ("**Receipts**") attached for the payment of installments of principal prior to such Bearer Note's stated maturity. Registered Notes and Global Notes do not have Receipts, Coupons or Talons attached on issue.

Notes are issued in the Specified Denomination(s) set out in the applicable Pricing Supplement which, in the case of Registered Notes sold other than pursuant to Regulation S, shall be the Authorized Denomination (as defined below) and, in the case of Notes having a maturity of 183 days or less, the Specified Denomination shall be at least US$500,000 (or the equivalent in any other currency or currencies). Each Tranche of Notes is issued in a nominal amount that is a multiple of the applicable Specified Denomination.

"**Authorized Denomination**" means:

(i) in the case of a Registered Global Note, unless otherwise specified in the applicable Pricing Supplement, US$200,000 (or its equivalent in any other currency rounded upwards as specified in the relevant Pricing Supplement) and higher integral multiples of US$1,000, or the higher denomination or denominations specified in the applicable Pricing Supplement; and

(ii) in the case of a Definitive Registered Note which is initially offered and sold to Institutional Accredited Investors pursuant to Section 4(2) of the Securities Act, US$500,000 (or its equivalent in any other currency rounded upwards as specified in the applicable Pricing Supplement) and higher integral multiples of US$1,000, or the higher denomination or denominations specified in the applicable Pricing Supplement.

Any minimum authorized denomination required by any law or directive or regulatory authority in respect of the currency of issue of any Note shall be such as applied on or prior to the date of issue of such Note.

Subject as set out below, title to Bearer Notes, Receipts and Coupons will pass by delivery. Title to Registered Notes will pass upon registration of transfers in accordance with the provisions of the Agency Agreement. The Issuer, any Paying Agent, the Registrar, any Transfer Agent and (if applicable) the CMU Lodging Agent will (except as otherwise required by law) deem and treat the bearer of any Bearer Note, Receipt or Coupon and the registered holder of any Registered Note as the absolute owner thereof (whether or not overdue and notwithstanding any notice of ownership or writing thereon or notice of any previous loss or theft thereof) for all purposes but, in the case of any Global Note, without prejudice to the provisions set out in the next paragraph.

For so long as any of the Notes is represented by a Global Note held on behalf of Euroclear Bank SA/NV ("**Euroclear**") and/or Clearstream Banking, S.A. ("**Clearstream**") and/or a sub-custodian for the Central Moneymarkets Unit Service operated by the Hong Kong Monetary Authority (the "**CMU Service**"), each person (other than Euroclear, Clearstream or the CMU Service, as applicable) who is for the time being shown in the records of Euroclear, Clearstream or the CMU Service as the holder of a particular nominal amount of such Notes (in which regard any certificate or other document issued by Euroclear, Clearstream, the CMU Service or, as the case may be, DTC, as to the nominal amount of such Notes standing to the account of any person shall be conclusive and binding for all purposes except in the case of manifest error) shall be treated by the Issuer and the Agents as the holder of such nominal amount of such Notes for all purposes other than with respect to the payment of principal or interest on such nominal amount of such Notes, for which purpose the bearer of the relevant Bearer Global Note or the registered holder of the relevant Registered Global Note shall be treated by the Issuer and the Agents as the holder of such nominal amount of such Notes in accordance with and subject to the terms of the relevant Global Note (and the expressions "**Noteholder**" and "**holder of Notes**" and related expressions shall be construed accordingly). Notwithstanding the above, if a Note (whether in global or definitive form) is held through the CMU Service, any payment that is made in respect of such Note shall be made at the direction of the bearer or the registered holder to the person(s) for whose account(s) interests in such Note are credited as being held through the CMU Service in accordance with the CMU Rules at the relevant time as notified to the CMU Lodging Agent by the CMU Service in a relevant CMU Instrument Position Report or any other relevant notification by the CMU Service. Such notification shall be conclusive evidence of the records of the CMU Service as to the identity of any accountholder (the "**CMU Accountholders**") and the principal amount of any Note credited to its account, save in the case of manifest error, and such payments shall discharge the obligation of the Issuer in respect of that payment under such Note.

For so long as The Depository Trust Company ("**DTC**") or its nominee is the registered owner or holder of a Registered Global Note, DTC or such nominee, as the case may be, will be considered the sole owner or holder of the Notes represented by such Registered Global Note for all purposes under the Agency Agreement and the Notes except to the extent that in accordance with DTC's published rules and procedures any ownership rights may be exercised by its participants or beneficial owners through participants.

Notes which are represented by a Global Note will be transferable only in accordance with the rules and procedures for the time being of Euroclear, Clearstream, the CMU Service and DTC, as the case may be.

References to Euroclear, Clearstream, the CMU Service and/or DTC shall, whenever the context so permits, be deemed to include a reference to any additional or alternative clearing system specified in the applicable Pricing Supplement or as may otherwise be approved by the Issuer and the Principal Paying Agent.

2. Transfers of Registered Notes

(a) Transfers of interests in Registered Global Notes

Transfers of beneficial interests in Registered Global Notes will be effected by DTC, the CMU Service, Euroclear or Clearstream, as the case may be, and, in turn, by other participants and, if appropriate, indirect participants in such clearing systems acting on behalf of beneficial transferors and transferees of such interests. A beneficial interest in a Registered Global Note will be exchangeable for Definitive Registered Notes if (i) Euroclear, Clearstream, the CMU Service or DTC, as the case may be, notifies the Issuer that it is unwilling or unable to continue as depositary for such Registered Global Note, (ii) if applicable, DTC ceases to be a "**Clearing Agency**" registered under the United States Securities Exchange Act of 1934, as amended (the "**Exchange Act**") or either Euroclear, Clearstream or the CMU Service, as the case may be, is closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or announces its intention permanently to cease business, and a successor depositary or alternative clearing system satisfactory to the Issuer and the Registrar and, in the case of CMU Notes, the CMU Lodging Agent is not available, (iii) an Event of Default (as defined in Condition 12) has occurred and is continuing with respect to such Notes or (iv) the Issuer has or will become subject to adverse tax consequences which would not be suffered if the Notes had been represented by the Registered Note in definitive form. Upon the occurrence of any of the events described in the preceding sentence, the Issuer will cause the appropriate Definitive Registered Notes to be delivered, *provided that*, notwithstanding the above, no Definitive Registered Notes will be issued until expiry of the applicable Distribution Compliance Period, subject to compliance with all applicable legal and regulatory restrictions, be transferable for Notes in definitive form or for a beneficial interest in another Registered Global Note only in the authorized denominations set out in the applicable Pricing Supplement and only in accordance with the rules and operating procedures for the time being of DTC, the CMU Service, Euroclear or Clearstream, as the case may be, and in accordance with the terms and conditions specified in the Agency Agreement. Transfers of a Registered Global Note registered in the name of a nominee or a sub-custodian for DTC, the CMU Service, Euroclear or Clearstream, as the case may be, shall be limited to transfers of such Registered Global Note, in whole but not in part, to another nominee or sub-custodian of DTC, the CMU Service, Euroclear or Clearstream, as the case may be, or such successor's nominee or sub-custodian.

(b) Transfers of Definitive Registered Notes

Subject as provided in Conditions 2(c), (d) and (e) below, upon the terms and subject to the conditions set forth in the Agency Agreement, a Definitive Registered Note may be transferred in whole or in part (in the authorized denominations set out in the applicable Pricing Supplement). In order to effect any such transfer (a) the holder or holders must surrender (i) the Definitive Registered Note for registration of the transfer of the Definitive Registered Note (or the relevant part of the Definitive Registered Note) at the specified office of the Registrar or any Transfer Agent, with the form of transfer thereon duly executed by the holder or holders thereof or his or their attorney or attorneys duly authorized in writing and (ii) complete and deposit such other certifications as may be required by the Registrar or, as the case may be, the relevant Transfer Agent and (b) the Registrar or, as the case may be, the relevant Transfer Agent must, after due and careful enquiry, be satisfied with the documents of title and the identity of the person making the request. Any such transfer will be subject to such reasonable requirements as the Issuer and the Registrar or, as the case may be, the relevant Transfer Agent may from time to time prescribe (the initial such regulation being set out in Schedule 9 of the Agency Agreement). Subject as provided above, the Registrar or, as the case may be, the relevant Transfer Agent will, within five business days (being for this purpose a day on which banks are open for business in the city where the specified office of the Registrar or, as the case may be, the relevant Transfer Agent is located) of the request (or such longer period as may be required to comply with any applicable fiscal or other laws or regulations) authenticate and deliver, or procure the authentication and delivery of, at its specified office to the transferee or (at the risk of the transferee) send by uninsured mail to such address as the transferee may request, a new Definitive Registered Note of a like aggregate nominal amount to the Definitive Registered Note (or the relevant part of the Definitive Registered Note) transferred. In the case of the transfer of part only of a Definitive Registered Note, a new Definitive Registered Note in respect of the balance of the Definitive Registered Note not transferred will be so authenticated and delivered or (at the risk of the transferor) sent to the transferor.

(c) Transfers of interests in Regulation S Global Notes

Prior to expiry of the applicable Distribution Compliance Period (as defined below), transfers by the holder of, or of a beneficial interest in, a Regulation S Global Note (as defined below) to a transferee in the United States or who is a U.S. person will only be made:

(i) upon receipt by the Registrar of a written certification substantially in the form set out in the Agency Agreement, amended as appropriate (a "**Transfer Certificate**"), copies of which are available from the specified office of the Registrar or any Transfer Agent, from the transferor of the Note or beneficial interest therein to the effect that such transfer is being made:

   (A) to a person whom the transferor reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A (as defined below); or

   (B) to a person who is an Institutional Accredited Investor (as defined below), in which case the Transfer Certificate must be accompanied by a duly executed investment letter from the relevant transferee substantially in the form set out in Schedule 6 of the Agency Agreement (an "**IAI Investment Letter**"); or

(ii) otherwise pursuant to the Securities Act (as defined below) or an exemption therefrom, subject to receipt by the Issuer of such satisfactory evidence as the Issuer may reasonably require, which may include an opinion of U.S. counsel, that such transfer is in compliance with any applicable federal securities laws of the United States or any applicable securities laws of any state of the United States, and, in each case, in accordance with any applicable federal securities laws of the United States or any applicable securities laws of any state of the United States or any other jurisdiction.

In the case of (i)(A) above, such transferee may take delivery through a Legended Note (as defined below) in global or definitive form and, in the case of (i)(B) above, such transferee may take delivery only through a Legended Note in definitive form. After expiry of the applicable Distribution Compliance Period (a) beneficial interests in Regulation S Notes registered in the name of a nominee for DTC may be held through DTC directly by a participant in DTC or indirectly through a participant in DTC and (b) such certification requirements will no longer apply to such transfers.

(d) Transfers of interests in Legended Notes

Transfers of Legended Notes or beneficial interests therein may be made:

(i) to a transferee who takes delivery of such interest through a Regulation S Global Note, upon receipt by the Registrar of a duly completed Transfer Certificate from the transferor to the effect that such transfer is being made in accordance with Regulation S and that in the case of a Regulation S Global Note registered in the name of a nominee for DTC, if such transfer is being made prior to expiry of the applicable Distribution Compliance Period, the interests in the Notes being transferred will be held immediately thereafter indirectly through Euroclear and/or Clearstream; or

(ii) to a transferee who takes delivery of such interest through a Rule 144A Global Note if the transferee is a person whom the transferor reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A; or

(iii) to a transferee who takes delivery of such interest through a Legended Note:

(A) where the transferee is a person whom the transferor reasonably believes is a QIB, in a transaction meeting the requirements of Rule 144A, without certification; or

(B) where the transferee is an Institutional Accredited Investor, subject to delivery to the Registrar of a Transfer Certificate from the transferor to the effect that such transfer is being made to an Institutional Accredited Investor, together with a duly executed investment letter from the relevant transferee substantially in the form set out in the Agency Agreement (an "**IAI Investment Letter**"); or

(iv) otherwise pursuant to the Securities Act or an exemption therefrom, subject to receipt by the Issuer of such satisfactory evidence as the Issuer may reasonably require, which may include an opinion of U.S. counsel, that such transfer is in compliance with any applicable federal securities laws of the United States or any applicable securities laws of any state of the United States;

and in each case, in accordance with any applicable federal securities laws of the United States or any applicable securities laws of any state of the United States or any other jurisdiction.

Notes transferred by Institutional Accredited Investors to QIBs pursuant to Rule 144A or outside the United States pursuant to Regulation S will be eligible to be held by such QIBs or non-U.S. investors through DTC, Euroclear, Clearstream or the CMU Service, as appropriate, and the Registrar will arrange for any Notes which are the subject of such a transfer to be represented by the appropriate Registered Global Note, where applicable.

Upon the transfer, exchange or replacement of Legended Notes, or upon specific request for removal of the Legend, the Registrar shall deliver only Legended Notes or refuse to remove the Legend, as the case may be, unless there is delivered to the Issuer such satisfactory evidence as may reasonably be required by the Issuer, which may include an opinion of U.S. counsel, that neither the Legend nor the restrictions on transfer set forth therein are required to ensure compliance with the provisions of the Securities Act.

(e) Exchanges and transfers of Registered Notes generally

Registered Notes may not be exchanged for Bearer Notes and vice versa.

Holders of Definitive Registered Notes, other than Institutional Accredited Investors, may exchange such Definitive Registered Notes for interests in a Registered Global Note of the same type at any time.

(f) Registration of transfer upon partial redemption

In the event of a partial redemption of Notes under Condition 8(c), the Issuer shall not be required to register the transfer of any Registered Note, or part of a Registered Note, called for partial redemption.

(g) Closed Periods

No Noteholder may require the transfer of a Registered Note to be registered during (i) the period of 15 days ending on the due date for any redemption or payment of principal or interest or payment on such Note and (ii) during the 15 days before any dates on which Notes may be called for redemption by the Issuer at its option pursuant to Condition 8.3, (iii) after any such Note has been called for redemption or (iv) during the period of seven (7) days ending (and including) on any Record Date (as defined below).

(h) Costs of registration

Noteholders will not be required to bear the costs and expenses of effecting any registration of transfer as provided above, except for any costs or expenses of delivery other than by regular uninsured mail and except that the Issuer may require the payment of a sum sufficient to cover any stamp duty, tax or other governmental charge that may be imposed in relation to the registration.

(i) Definitions

In this Condition, the following expressions shall have the following meanings:

"**Distribution Compliance Period**" means the period that ends 40 days after the completion of the distribution of each Tranche of Notes, as certified by the relevant Dealer (in the case of a non-syndicated issue) or the relevant Lead Manager (in the case of a syndicated issue);

"**Institutional Accredited Investor**" means "**accredited investors**" (as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act) that are institutions;

"**Legended Note**" means Registered Notes in definitive form that are issued to Institutional Accredited Investors and Registered Notes (whether in definitive form or represented by a Registered Global Note) sold in private transactions to QIBs in accordance with the requirements of Rule 144A, which notes bear a legend specifying certain restrictions on transfer;

"**QIB**" means a "**qualified institutional buyer**" within the meaning of Rule 144A;

"**Regulation S**" means Regulation S under the Securities Act;

"**Regulation S Global Note**" means a Registered Global Note representing Notes sold outside the United States in reliance on Regulation S;

"**Rule 144A**" means Rule 144A under the Securities Act;

"**Rule 144A Global Note**" means a Registered Global Note representing Notes sold in the United States or to QIBs; and

"**Securities Act**" means the United States Securities Act of 1933, as amended.

3. Status of the Notes

(a) Status of Senior Notes

Notes whose status is specified in the applicable Pricing Supplement as Senior (the "**Senior Notes**") and any relative Receipts and Coupons constitute direct, unconditional, unsubordinated and (subject to Condition 4) unsecured obligations of the Issuer which rank *pari passu* among themselves and will rank at least *pari passu* with all other present and future unsecured (subject to Condition 4) and unsubordinated obligations of the Issuer, save for such as may be preferred by mandatory provisions of applicable law.

(b) Status of Subordinated Notes

This Condition 3(b) applies only to Notes whose status is specified in the applicable Pricing Supplement as Subordinated.

The Notes that are by their terms subject to the provisions of this Condition 3(b) (the "**Subordinated Notes**") and any relative Receipts and Coupons constitute direct, unsecured and subordinated (as described below) obligations of the Issuer which will at all times rank *pari passu* and ratably without any preference among themselves, at least *pari passu* with all other subordinated obligations of the Issuer which do not rank or are not expressed by their terms to rank junior or senior to the Subordinated Notes and in priority to claims of holders of all classes of equity (including holders of preference shares (if any)) of the Issuer.

(i) If, on or prior to the Maturity Date or at any time while any amount is due and outstanding under any Subordinated Notes, a Bankruptcy Event (as defined below) occurs and so long as it continues, any amounts which become due then or thereafter under the Subordinated Notes (including overdue amounts) shall not be payable unless and until the total amount of any and all Senior Indebtedness of the Issuer which is listed on the distribution list (as amended, if such be the case) for final distribution submitted to the court in the bankruptcy proceedings is paid in full or provided to be paid in full in such bankruptcy proceedings.

(ii) If, on or prior to the Maturity Date or at any time while any amount is due and outstanding under any Subordinated Notes, a Rehabilitation Event (as defined below) occurs and so long as it continues, any amounts which become due then or thereafter under the Subordinated Notes (including overdue amounts) shall not be payable unless and until the total amount of any and all Senior Indebtedness of the Issuer which is listed on the rehabilitation plan of the Issuer at the time when the court's approval of such plan becomes final and conclusive is paid in full or provided to be paid in full in the rehabilitation proceedings to the extent of the original amount thereof (without regard to any adjustment of such amount in the approved rehabilitation plan).

(iii) If, on or prior to the Maturity Date or at any time while any amount is due and outstanding under any Subordinated Notes, a Liquidation Event (as defined below) occurs and so long as it continues, any amounts which become due then or thereafter under the Subordinated Notes (including overdue amounts) shall not be payable unless and until the total amount of any and all Senior Indebtedness of the Issuer is paid in full or provided to be paid in full in such liquidation proceedings.

(iv) If, on or prior to the Maturity Date or at any time while any amount is due and outstanding under any Subordinated Notes, a Foreign Event (as defined below) occurs and so long as it continues, any amounts which become due then or thereafter under the Subordinated Notes (including overdue amounts) shall only become payable upon conditions equivalent to those enumerated in the above three paragraphs having been fulfilled, *provided that* notwithstanding any provision herein to the contrary if the imposition of any such conditions is not allowed under such proceedings, any amounts which become due under the Subordinated Notes shall become payable in accordance with the terms herein provided and not subject to such conditions.

(v) A holder of a Subordinated Note by its acceptance thereof or its interest therein shall be deemed to agree that (i) if any payment in respect of such Note is made to such holder after the occurrence of a Subordination Event and the amount of such payment exceeds the amount, if any, that should have been paid to such holder upon the proper application of these subordination provisions, the payment of such excess amount shall be deemed null and void and such holder (without the Registrar or any Paying Agent having any obligation or liability with respect thereto, save to the extent that the Registrar or such Paying Agent shall return to the Issuer any such excess amount which remains held by it at the time of the notice next referred to) shall be obliged to return the amount of the excess payment within 10 days of receiving notice from the Issuer of the excess payment and (ii) upon the occurrence of a Subordination Event and so long as such Subordination Event continues, such holder shall not exercise any right to set off any liabilities of the Issuer under such Note which become so payable on or after the date on which the Subordination Event occurs against any liabilities of such holder owed to the Issuer unless, until and only in such amount as the liabilities of the Issuer under such Note become payable pursuant to the proper application of these subordination provisions.

In addition, a holder of a Subordinated Note by its acceptance thereof or its interest therein shall be deemed to have waived, and agreed not to exercise, any right as a creditor to require the Issuer to redeem such Subordinated Note or provide collateral with respect thereto.

In these Conditions:

a "**Bankruptcy Event**" shall mean a court of competent jurisdiction in Korea having adjudicated the Issuer to be bankrupt pursuant to the provisions of the Act on the Debtor Rehabilitation and Bankruptcy of Korea or any successor legislation thereto;

a "**Foreign Event**" shall mean in any jurisdiction other than Korea, the Issuer having become subject to bankruptcy, rehabilitation or other equivalent proceedings pursuant to any applicable law of any jurisdiction other than Korea;

a "**Liquidation Event**" shall mean the Issuer being dissolved and liquidated under the Korean Commercial Code;

a "**Rehabilitation Event**" shall mean a court of competent jurisdiction in Korea having adjudicated the Issuer to be subject to the rehabilitation proceedings pursuant to the provisions of the Act on the Debtor Rehabilitation and Bankruptcy of Korea or any successor legislation thereto;

"**Senior Indebtedness of the Issuer**" shall mean all deposits and other liabilities of the Issuer (other than (A) those which are subject to provisions equivalent to the payment conditions in paragraph (i), (ii), (iii) or (iv) above and (B) those which rank or are expressed to rank *pari passu* with or junior to the Subordinated Notes); and

a "**Subordination Event**" shall mean any Bankruptcy Event, Rehabilitation Event, Liquidation Event or Foreign Event.

4. Negative Pledge

(a) Negative Pledge

So long as any of the Senior Notes remains outstanding (as defined in the Agency Agreement), the Issuer will not create or permit to subsist any mortgage, charge, pledge or other security interest upon or over the whole or any part of its property, assets or revenues (whether present or future) to secure for the benefit of the holders of any International Investment Securities (as defined below):

(i) payment of any sum due in respect of any such International Investment Securities;

(ii) payment under any guarantee in respect of any such International Investment Securities; or

(iii) payment under any indemnity or other like obligations in respect of any such International Investment Securities,

without, in any such case and at the same time, according to the holders of the Senior Notes either the same security as is available for the benefit of the holders of such International Investment Securities or such other security as shall be approved for the purpose by an Extraordinary Resolution (as defined in the Agency Agreement) of the holders of the Senior Notes.

For the avoidance of doubt, notwithstanding the foregoing, under the Act on Issuance of Covered Bonds, which was enacted on January 14, 2014 and became effective on April 15, 2014, in Korea, the issuance of covered bonds by the Issuer and any arrangement relating to the segregation or "ring-fencing" of any part of the Issuer's property, assets or revenues (whether present or future) for the purpose thereof shall be permitted, *provided* that such covered bonds are issued and such arrangement is entered into, respectively, in compliance with the Act on Issuance of Covered Bonds and that such property, assets and revenues are intended to form part of the pool of the assets in respect of which a priority of claim in favor of the covered bondholders may be given.

(b) Interpretation

In these Conditions:

"**International Investment Securities**" means notes, bonds, debentures, certificates of deposit or investment securities of any person which:

(i) by their terms either are payable, or confer a right to receive payment, in any currency other than Won or are denominated in Won and more than one-half of the aggregate principal amount of which is initially distributed outside Korea by or with the authorization of the Issuer;

(ii) are for the time being, or are intended to be, quoted, listed, ordinarily dealt in or traded on any stock exchange or over-the-counter or other securities market outside Korea; and

(iii) are not (A) securities issued in accordance with a securitization plan pursuant to the Asset-Backed Securitization Act of Korea (or other similar laws of Korea); or (B) securities or instruments serviced primarily by the cash flows of a discrete pool of receivables or other financial assets, either fixed or revolving, that by their terms convert into cash within a finite period and which are commonly regarded as asset-backed securities.

5. Redenomination

(a) Redenomination

Where redenomination is specified in the applicable Pricing Supplement as being applicable, the Issuer may, without the consent of the Noteholders, the Receiptholders and the Couponholders, on giving prior notice to the Agent, Euroclear and Clearstream and at least 30 days' prior notice to the Noteholders in accordance with Condition 17 (*Notices*), elect that, with effect from the Redenomination Date specified in the notice, the Notes shall be redenominated in Euro.

The election will have effect as follows:

(i) the Notes and the Receipts shall be deemed to be redenominated into Euro with a principal amount for each Note and Receipt equal to the principal amount of that Note or Receipt in the Specified Currency, converted into Euro at the Established Rate (as defined below), rounded to the nearest Euro 0.01 if the conversion results in an amount involving a fraction of Euro 0.01, *provided that*, if the Issuer determines that the then market practice in respect of the redenomination into Euro of internationally offered securities is different from the provisions specified above, such provisions shall be deemed to be amended so as to comply with such market practice and the Issuer shall promptly notify the Noteholders, the stock exchange (if any) on which the Notes may be listed and the Agents of such deemed amendments;

(ii) except to the extent that an Exchange Notice has been given in accordance with paragraph (iv) below, the amount of interest due in respect of the Notes will be calculated by reference to the aggregate principal amount of Notes presented (or, as the case may be, in respect of which Coupons are presented) for payment by the relevant holder and the amount of such payment shall be rounded down to the nearest Euro 0.01;

(iii) if definitive Notes are required to be issued after the Redenomination Date (as defined below), they shall be issued at the expense of the Issuer in the denominations of Euro 1,000, Euro 10,000, Euro 100,000 and (but only to the extent of any remaining amounts less than Euro 1,000 or such smaller denominations as the Agent may approve) Euro 0.01 and such other denominations as the Agent shall determine and notify to the Noteholders;

(iv) if issued prior to the Redenomination Date, all unmatured Coupons denominated in the Specified Currency (whether or not attached to the Notes) will become void with effect from the date on which the Issuer gives notice (the "**Exchange Notice**") that replacement Euro-denominated Notes, Receipts and Coupons are available for exchange (*provided that* such securities are so available) and no payments will be made in respect of them. The payment obligations contained in any Notes and Receipts so issued will also become void on that date although those Notes and Receipts will continue to constitute valid exchange obligations of the Issuer. New Euro-denominated Notes, Receipts and Coupons will be issued in exchange for Notes, Receipts and Coupons denominated in the Specified Currency in such manner as the Agent may specify and as shall be notified to the Noteholders in the Exchange Notice. No Exchange Notice may be given less than 15 days prior to any date for payment of principal or interest on the Notes;

(v) after the Redenomination Date, all payments in respect of the Notes, the Receipts and the Coupons, other than payments of interest in respect of periods commencing before the Redenomination Date, will be made solely in Euro as though references in the Notes to the Specified Currency were to Euro. Payments will be made in Euro by credit or transfer to a Euro account (or any other account to which Euro may be credited or transferred) specified by the payee;

(vi) if the Notes are Fixed Rate Notes and interest for any period ending on or after the Redenomination Date is required to be calculated for a period ending other than on an Interest Payment Date (as specified in the applicable Pricing Supplement), it will be calculated by applying the Rate of Interest to each Specified Denomination, multiplying such sum by the applicable Day Count Fraction, and rounding the resultant figure to the nearest quotient or sub-unit of the relevant Specified Currency, half of any such sub-unit being rounded upwards or otherwise in accordance with applicable market convention;

(vii) if the Notes are Floating Rate Notes, the applicable Pricing Supplement will specify any relevant changes to the provisions relating to interest; and

(viii) such other changes shall be made to this Condition as the Issuer may decide, after consultation with the Agent, and as may be specified in the notice, to conform it to conventions then applicable to instruments denominated in Euro.

(b) Definitions

In these Conditions, the following expressions have the following meanings:

"**Established Rate**" means the rate for the conversion of the Specified Currency (including compliance with rules relating to roundings in accordance with applicable European Community regulations) into Euro established by the Council of the European Union pursuant to Article 123 of the Treaty;

"**Euro**" means the lawful currency of the Member States of the European Union that have adopted the single currency in accordance with the Treaty;

"**Redenomination Date**" means (in the case of interest bearing Notes) any date for payment of interest under the Notes or (in the case of Zero Coupon Notes) any date, in each case specified by the Issuer in the notice given to the Noteholders pursuant to paragraph (a) above, which falls on or after the date on which the country of the Specified Currency first participates in the third stage of European economic and monetary union; and

"**Treaty**" means the Treaty establishing the European Community (signed in Rome on March 25, 1957), as amended from time to time.

6. Interest

(a) Interest on Fixed Rate Notes

(I) In the case of Fixed Rate Notes where Conditions 6(a)(I) is specified as being applicable in the applicable Pricing supplement, the following provisions will apply instead of Condition 6(a)(II):

Each Fixed Rate Note bears interest on its outstanding nominal amount (or, if it is a Partly Paid Note, the amount paid up) from (and including) the Interest Commencement Date at the rate(s) per annum (expressed as a percentage) equal to the Rate(s) of Interest. Interest will be payable in arrears on the Interest Payment Date(s) in each year up to (and including) the Maturity Date.

If the Notes are in definitive form, except as provided in the applicable Pricing Supplement, the amount of interest payable on each Interest Payment Date in respect of the Fixed Interest Period ending on such date will amount to the Fixed Coupon Amount. Payments of interest on any Interest Payment Date will, if so specified in the applicable Pricing Supplement, amount to the Broken Amount so specified.

Except in the case of Notes in definitive form where a Fixed Coupon Amount or Broken Amount is specified in the applicable Pricing Supplement, interest shall be calculated in respect of any period by applying the Rate of Interest to:

(A) in the case of Fixed Rate Notes which are represented by a Global Note, the aggregate outstanding nominal amount of the Fixed Rate Notes represented by such Global Note (or, if they are Partly Paid Notes, the aggregate amount paid up); or

(B) in the case of Fixed Rate Notes in definitive form, the Calculation Amount;

and, in each case, multiplying such sum by the applicable Day Count Fraction, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such sub-unit being rounded upwards or otherwise in accordance with applicable market convention. Where the Specified Denomination of a Fixed Rate Note in definitive form comprises more than one Calculation Amount, the amount of interest payable in respect of such Fixed Rate Note shall be the aggregate of the amounts (determined in the manner provided above) for each Calculation Amount comprising the Specified Denomination without any further rounding.

In these Conditions:

"**Day Count Fraction**" means, in respect of the calculation of an amount of interest for any Fixed Interest Period:

(i) if "Actual/Actual (ICMA)" is specified in the applicable Pricing Supplement:

(A) in the case of Notes where the number of days in the relevant period from (and including) the most recent Interest Payment Date (or, if none, the Interest Commencement Date) to (but excluding) the relevant payment date (the "**Accrual Period**") is equal to or shorter than the Determination Period during which the Accrual Period ends, the number of days in such Accrual Period divided by the product of (1) the number of days in such Determination Period (as defined below) and (2) the number of Determination Dates (as specified in the applicable Pricing Supplement) that would occur in one calendar year; or

(B) in the case of Notes where the Accrual Period is longer than the Determination Period during which the Accrual Period ends, the sum of:

(i) the number of days in such Accrual Period falling in the Determination Period in which the Accrual Period begins divided by the product of (x) the number of days in such Determination Period and (y) the number of Determination Dates that would occur in one calendar year; and

(ii) the number of days in such Accrual Period falling in the next Determination Period divided by the product of (x) the number of days in such Determination Period and (y) the number of Determination Dates that would occur in one calendar year;

(ii) if "30/360" is specified in the applicable Pricing Supplement, the number of days in the period from (and including) the most recent Interest Payment Date (or, if none, the Interest Commencement Date) to (but excluding) the relevant payment date (such number of days being calculated on the basis of 12 30-day months) divided by 360; and

In this Condition 6(a)(I):

"**Determination Period**" means each period from (and including) a Determination Date to but excluding the next Determination Date (including, where either the Interest Commencement Date or the final Interest Payment Date is not a Determination Date, the period commencing on the first Determination Date prior to, and ending on the first Determination Date falling after, such date);

"**Fixed Interest Period**" means the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date; and

"**sub-unit**" means, with respect to any currency other than Euro, the lowest amount of such currency that is available as legal tender in the country of such currency and, with respect to Euro, means one cent.

(II) In the case of Fixed Rate Notes where Conditions 6(a)(II) is specified as being applicable in the applicable Pricing supplement, the following provisions will apply instead of Condition 6(a)(I):

Each Fixed Rate Note bears interest on its outstanding nominal amount (or, if it is a Partly Paid Note, the amount paid up) from (and including) the Interest Commencement Date at the rate(s) per annum (expressed as a percentage) equal to the Rate(s) of Interest. If any Interest Payment Date would otherwise fall on a day which is not a business day (as defined below), it shall be postponed to the next day which is a business day unless it would thereby fall into the next calendar month in which event it shall be brought forward to the immediately preceding day. Interest will be payable in arrears on the Interest Payment Date(s) in each year up to (and including) the Maturity Date.

If the Notes are in definitive form, except as provided in the applicable Pricing Supplement, the amount of interest payable on each Interest Payment Date in respect of the Fixed Interest Period ending on such date will amount to the Fixed Coupon Amount. Payments of interest on any Interest Payment Date will, if so specified in the applicable Pricing Supplement, amount to the Broken Amount so specified.

The Calculation Agent will, as soon as practicable after 11:00 a.m. (Hong Kong time) on the second business day before the beginning of each Fixed Interest Period (each an "**Interest Determination Date**"), calculate the amount of interest payable per Calculation Amount for the relevant Fixed Interest Period. The determination of the amount of interest payable per Calculation Amount by the Calculation Agent shall (in the absence of manifest error and after confirmation by the Issuer) be final and binding upon all parties.

The Calculation Agent will cause the amount of interest payable per Calculation Amount for each Fixed Interest Period and the relevant Interest Payment Date to be notified to each of the Paying Agents and to be notified to Noteholders as soon as possible after their determination but in no event later than the fourth business day thereafter. The amount of interest payable per Calculation Amount and the Interest Payment Date so published may subsequently be amended (or appropriate alternative arrangements made by way of adjustment) without notice in the event of an extension or shortening of the Interest Period. If the Notes become due and payable under Condition 12, the accrued interest per Calculation Amount shall nevertheless continue to be calculated as previously by the Calculation Agent in accordance with this Condition 6(a)(II) but no publication of the amount of interest payable per Calculation Amount so calculated need be made.

Except in the case of Notes in definitive form where an applicable Fixed Coupon Amount or Broken Amount is specified in the applicable Pricing Supplement, interest shall be calculated in respect of any period by applying the Rate of Interest to:

(A) in the case of Fixed Rate Notes which are represented by a Global Note, the aggregate outstanding nominal amount of the Fixed Rate Notes represented by such Global Note (or, if they are Partly Paid Notes, the aggregate amount paid up); or

(B) in the case of Fixed Rate Notes in definitive form, the Calculation Amount;

and, in each case, multiplying such sum by the actual number of days in the Fixed Interest Period concerned divided by 365, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such sub-unit being rounded upwards or otherwise in accordance with applicable market convention. Where the Specified Denomination of a Fixed Rate Note in definitive form is a multiple of the Calculation Amount, the amount of interest payable in respect of such Fixed Rate Note shall be the product of the amount (determined in the manner provided above) for the Calculation Amount and the amount by which the Calculation Amount is multiplied to reach the Specified Denomination, without any further rounding.

In this Condition 6(a)(II):

"**business day**" means a day (other than a Saturday, Sunday or public holiday) upon which commercial banks are generally open for business and settlement of Renminbi payments in the Business Center as specified in the applicable Pricing Supplement; and

"**Fixed Interest Period**" means the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date; and

"**sub-unit**" means, with respect to Renminbi, the lowest amount of such currency that is available as legal tender in the People's Republic of China.

(b) Interest on Floating Rate Notes and Index Linked Interest Notes

(i) *Interest Payment Dates*

Each Floating Rate Note and Index Linked Interest Note bears interest on its nominal amount (or, if it is a Partly Paid Note, the amount paid up) from (and including) the Interest Commencement Date and such interest will be payable in arrears on either:

(A) the Interest Payment Date(s) (each an "**Interest Payment Date**") in each year specified in the applicable Pricing Supplement; or

(B) if no express Interest Payment Date(s) is/are specified in the applicable Pricing Supplement, each date (each an "**Interest Payment Date**") which falls the number of months or other period specified as the Specified Period in the applicable Pricing Supplement after the preceding Interest Payment Date or, in the case of the first Interest Payment Date, after the Interest Commencement Date.

Such interest will be payable in respect of each Interest Period (which expression shall in these Terms and Conditions, mean the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date, each an "**Interest Period**").

If a Business Day Convention is specified in the applicable Pricing Supplement and (x) if there is no numerically corresponding day in the calendar month in which an Interest Payment Date should occur or (y) if any Interest Payment Date would otherwise fall on a day which is not a Business Day, then, if the Business Day Convention specified is:

(1) in any case where Specified Periods are specified in accordance with Condition 6(b)(i)(B) above, the Floating Rate Convention, such Interest Payment Date (i) in the case of (x) above, shall be the last day

that is a Business Day in the relevant month and the provisions of (B) below of this subparagraph (1) shall apply *mutatis mutandis* or (ii) in the case of (y) above, shall be postponed to the next day which is a Business Day unless it would thereby fall into the next calendar month, in which event (A) such Interest Payment Date shall be brought forward to the immediately preceding Business Day and (B) each subsequent Interest Payment Date shall be the last Business Day in the month which falls the Specified Period after the preceding applicable Interest Payment Date occurred; or

(2) the Following Business Day Convention, such Interest Payment Date shall be postponed to the next day which is a Business Day; or

(3) the Modified Following Business Day Convention, such Interest Payment Date shall be postponed to the next day which is a Business Day unless it would thereby fall into the next calendar month, in which event such Interest Payment Date shall be brought forward to the immediately preceding Business Day; or

(4) the Preceding Business Day Convention, such Interest Payment Date shall be brought forward to the immediately preceding Business Day.

In this Condition, "**Business Day**" means a day which is a day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in London and, in the case of an issue of CMU Notes, Hong Kong and, in case of an issue of Registered Notes represented by a Global Note registered in the name of DTC, New York city, and any Additional Business Center specified in the applicable pricing supplement; *provided that*, in relation to any payments, "Business Day" shall mean the Payment Day (as defined in Condition 7(f)) applicable to such Payment.

(ii) Rate of Interest

The Rate of Interest payable from time to time in respect of Floating Rate Notes and Index Linked Interest Notes will be determined in the manner specified in the applicable Pricing Supplement.

(A) ISDA Determination for Floating Rate Notes

Where ISDA Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will be the relevant ISDA Rate plus or minus (as indicated in the applicable Pricing Supplement) the Margin (if any). For the purposes of this sub-paragraph (A), "**ISDA Rate**" for an Interest Period means a rate equal to the Floating Rate that would be determined by the Principal Paying Agent under an interest rate swap transaction if the Principal Paying Agent were acting as Calculation Agent for that swap transaction under the terms of an agreement incorporating the 2006 ISDA Definitions, as published by the International Swaps and Derivatives Association, Inc. and as amended and updated as at the Issue Date of the first Tranche of Notes (the "**ISDA Definitions**") and under which:

(1) the Floating Rate Option is as specified in the applicable Pricing Supplement;

(2) the Designated Maturity is a period specified in the applicable Pricing Supplement; and

(3) the relevant Reset Date is either (i) if the applicable Floating Rate Option is based on the London inter-bank offered rate ("**LIBOR**"), the Euro-zone inter-bank offered rate ("**EURIBOR**") or on the Hong Kong inter-bank offered rate ("**HIBOR**") for a currency, the first day of that Interest Period or (ii) in any other case, as specified in the applicable Pricing Supplement.

For the purposes of this sub-paragraph (A), (i) "**Floating Rate**", "**Calculation Agent**", "**Floating Rate Option**", "**Designated Maturity**" and "**Reset Date**" have the meanings given to those terms in the ISDA Definitions, (ii) the definition of "**Banking Day**" in the ISDA Definitions shall be amended to insert after the words "**are open for**" in the second line the word "**general**" and (iii) "**Euro-zone**" means the region comprised of Member States of the European Union that adopt or have adopted the single currency in accordance with the Treaty establishing the European Community, as amended by the Treaty on European Union.

When this sub-paragraph (A) applies, in respect of each relevant Interest Period the Agent will be deemed to have discharged its obligations under Condition 6(b)(iv) in respect of the determination of the Rate of Interest if it has determined the Rate of Interest in respect of such Interest Period in the manner provided in this sub-paragraph (A).

(B) Screen Rate Determination for Floating Rate Notes

(1) Where Screen Rate Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will, subject as provided below, be either:

(A) the offered quotation; or

(B) the arithmetic mean (rounded if necessary to the fifth decimal place, with 0.000005 being rounded upwards) of the offered quotations,

(expressed as a percentage rate per annum) for the Reference Rate which appears or appear, as the case may be, on the Relevant Screen Page as at 11:00 a.m. (London time, in the case of LIBOR, or Brussels time, in the case of EURIBOR or Hong Kong time, in the case of HIBOR) on the Interest Determination Date in question plus or minus (as indicated in the applicable Pricing Supplement) the Margin (if any), all as determined by the Principal Paying Agent. If five or more of such offered quotations are available on the Relevant Screen Page, the highest (or, if there is more than one such highest quotation, one only of such quotations) and the lowest (or, if there is more than one such lowest quotation, one only of such quotations) shall be disregarded by the Principal Paying Agent for the purpose of determining the arithmetic mean (rounded as provided above) of such offered quotations.

(2) If the Relevant Screen Page is not available or, if in the case of Condition 6(b)(ii)(B)(1)(A) above, no such offered quotation appears or, in the case of Condition 6(b)(ii)(B)(1)(B) above, fewer than three such offered quotations appear, in each case as at the time specified in the preceding paragraph the Principal Paying Agent shall request each of the Reference Banks (as defined below) to provide the Principal Paying Agent with its offered quotation (expressed as a percentage rate per annum) for the Reference Rate at approximately 11:00 a.m. (London time, in the case of LIBOR, or Brussels time, in the case of EURIBOR) on the Interest Determination Date in question. If two or more of the Reference Banks provide the Principal Paying Agent with such

offered quotations, the Rate of Interest for such Interest Period shall be the arithmetic mean (rounded if necessary to the fifth decimal place with 0.000005 being rounded upwards) of such offered quotations plus or minus (as appropriate) the Margin (if any), all as determined by the Principal Paying Agent.

(3) If on any Interest Determination Date one only or none of the Reference Banks provides the Principal Paying Agent with such offered quotations as provided in the preceding paragraph, the Rate of Interest for the relevant Interest Period shall be the rate per annum which the Principal Paying Agent determines as being the arithmetic mean (rounded if necessary to the fifth decimal place, with 0.000005 being rounded upwards) of the rates, as communicated to (and at the request of) the Principal Paying Agent by the Reference Banks or any two or more of them, at which such banks were offered, at approximately 11:00 a.m. (London time, in the case of LIBOR, or Brussels time, in the case of EURIBOR) on the relevant Interest Determination Date, deposits in the Specified Currency for a period equal to that which would have been used for the Reference Rate by leading banks in the London inter-bank market (if the Reference Rate is LIBOR) or the Euro-zone inter-bank market (if the Reference Rate is EURIBOR) plus or minus (as appropriate) the Margin (if any) or, if fewer than two of the Reference Banks provide the Principal Paying Agent with such offered rates, the offered rate for deposits in the Specified Currency for a period equal to that which would have been used for the Reference Rate, or the arithmetic mean (rounded as provided above) of the offered rates for deposits in the Specified Currency for a period equal to that which would have been used for the Reference Rate, at which, at approximately 11:00 a.m. (London time, in the case of LIBOR, or Brussels time, in the case of EURIBOR) on the relevant Interest Determination Date, any one or more banks (which bank or banks is or are in the opinion of the Issuer suitable for such purpose) informs the Principal Paying Agent it is quoting to leading banks in the London inter-bank market (if the Reference Rate is LIBOR) or the Euro-zone inter-bank market (if the Reference Rate is EURIBOR) plus or minus (as appropriate) the Margin (if any), *provided that*, if the Rate of Interest cannot be determined in accordance with the foregoing provisions of this paragraph, the Rate of Interest shall be determined as at the last preceding Interest Determination Date (though substituting, where a different Margin is to be applied to the relevant Interest Period from that which applied to the last preceding Interest Period, the Margin relating to the relevant Interest Period, in place of the Margin relating to that last preceding Interest Period).

(4) "**Reference Banks**" means, in the case of Condition 6(b)(ii)(B)(1)(A) above, those banks whose offered rates were used to determine such quotation when such quotation last appeared on the Relevant Screen Page and, in the case of Condition 6(b)(ii)(B)(1)(B) above, those banks whose offered quotations last appeared on the Relevant Screen Page when no fewer than three such offered quotations appeared.

(5) If the Reference Rate from time to time in respect of Floating Rate Notes is specified in the applicable Pricing Supplement as being other than LIBOR, EURIBOR or HIBOR, the Rate of Interest in respect of such Notes will be determined as provided in the applicable Pricing Supplement.

(C) Prime Rate Determination for Floating Rate Notes

(1) Where Prime Rate Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will equal:

(A) the rate as published in H.15(519) (as defined below) under the heading "Bank Prime Loan" (the "**Prime Rate**"); or

(B) if such rate is not so published by 9:00 a.m. (New York City time) on the Interest Determination Date, the arithmetic mean (rounded, if necessary, to the fourth decimal place, with 0.00005 being rounded upwards) of the rates of interest publicly announced by each bank named on the Reuters Screen USPRIME1 (as defined below) as such bank's prime rate or base lending rate as in effect on such Interest Determination Date, or

(C) if fewer than four such rates appear on the Reuters Screen USPRIME1 for such Interest Determination Date, the arithmetic mean (rounded, if necessary, to the fourth decimal place, with 0.00005 being rounded upwards) of the prime rates or base lending rates (quoted on the basis of the actual number of days in the year divided by 360) as of the close of business on such Interest Determination Date publicly announced by three major banks in New York City, selected by the Principal Paying Agent, as each of their prime rates or base lending rates, in each case plus or minus (as appropriate) the Margin (if any), all as determined by the Principal Paying Agent, *provided that*, if the Prime Rate is not published in H.15(519) or fewer than three banks selected as aforesaid by the Principal Paying Agent are quoting as mentioned in the previous sub-paragraph, the Rate of Interest with respect to such Interest Period shall be determined as at the last preceding Interest Determination Date (though substituting, where a different Margin is to be applied to the relevant Interest Period from that which applied to the last preceding Interest Period, the Margin relating to the relevant Interest Period, in place of the Margin relating to that last preceding Interest Period).

(2) "**H.15(519)**" means the weekly statistical release entitled "Statistical Release H.15(519), Selected Interest Rates", published by the Board of Governors of the United States Federal Reserve System, or any successor published publication.

(3) "**Reuters Screen USPRIME1**" means the display designed as page "USPRIME1" on the Reuters Monitor Money Rates Service (or such other page as may replace the USPRIME1 page on that service for the purpose of displaying prime rates or base lending rates of major United States banks).

(D) Federal Funds Rate Determination for Floating Rate Notes

(1) Where Federal Fund Rate Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will equal the rate for Federal Funds (the "**Federal Funds Rate**"):

(A) as published in H.15(519) under the heading "Federal Funds (Effective)"; or

(B) if such rate is not so published by 9:00 a.m. (New York City time) on the Interest Determination Date, then as published in Composite Quotations under the heading "Federal Funds/Effective Rate", in each case plus or minus (as appropriate) the Margin (if any), all as determined by the Principal Paying Agent; or

(2) if such rates are not published by 3:00 p.m. (New York City time) on the Interest Determination Date, the Principal Paying Agent shall determine the Rate of Interest on the Interest Determination Date as the arithmetic mean (rounded, if necessary, to the fourth decimal place, with 0.00005 being rounded upwards) of the rates for the last transaction in overnight Federal Funds arranged by three leading brokers of Federal Funds transactions in New York City, selected by the Principal Paying Agent, as of 9:00 a.m. (New York City time) on such Interest Determination Date plus or minus (as appropriate) the Margin (if any); or

(3) if the Federal Funds Rate is not determined in accordance with Condition 6(b)(ii)(D)(1) above or if fewer than three brokers selected as aforesaid by the Principal Paying Agent are quoting as mentioned in the previous sub-paragraph, the Rate of Interest with respect to such Interest Period shall be determined as at the last preceding Interest Determination Date (though substituting, where a different Margin is to be applied to the relevant Interest Period from that which applied to the last preceding Interest Period, the Margin relating to the relevant Interest Period, in place of the Margin relating to that last preceding Interest Period).

(E) Treasury Rate Determination for Floating Rate Notes

(1) Where Treasury Rate Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will equal the treasury bills rate (the "**Treasury Bills Rate**") being:

(A) the rate for the auction on the relevant Interest Determination Date (for the purposes of this paragraph (E), as defined below) of direct obligations of the United States ("**Treasury Bills**") having the Index Maturity specified in the applicable Pricing Supplement, as such rate is published in H.15(519) under the heading "U.S. Government Securities/Treasury Bills/ Auction Average (Investment)"; or

(B) if such rate is not so published by 3:00 p.m. (New York City time) on the Interest Determination Date, the auction average rate (expressed as a bond equivalent on the basis of a year of 365 or 366 days, as applicable, and applied on a daily basis) as otherwise announced by the United States Department of the Treasury; or

(C) in the event that the results of the auction of Treasury Bills having the specified Index Maturity are not published or reported as provided in sub-paragraphs (E)(1)(A) or (E)(1)(B) above, by 3:00 p.m. (New York City time) on such Interest Determination Date, or if no such auction is held during such week, then the rate as published in H.15(519) under the heading "U.S. Government Securities/Treasury Bills/Secondary Market" on the Interest Determination Date for the Index Maturity specified and in the applicable Pricing Supplement; or

(D) in the event no such rate is published as provided in the previous sub-paragraph, by 3:00 p.m. (New York City time) on such Interest Determination Date, the yield to maturity (expressed as a bond equivalent on the basis of a year of 365 or 366 days, as applicable, and applied on a daily basis) of the arithmetic mean (rounded, if necessary, to the fourth decimal place, with 0.00005 being rounded upwards) of the secondary market bid rates, as of approximately 3:30 p.m. (New York City time) on such Interest Determination Date, of three leading primary United States government securities dealers in New York City, selected by the Principal Paying Agent, for the issue of Treasury Bills with a remaining maturity closest to the applicable Index Maturity, in each case plus or minus (as appropriate) the Margin (if any), all as determined by the Principal Paying Agent, *provided that*, if the Rate of Interest cannot be determined in accordance with Conditions 6(b)(ii)(E)(1)(A)-(D) above the Rate of Interest with respect to such Interest Period shall be determined as at the last preceding Interest Determination Date (though substituting, where a different Margin is to be applied to the relevant Interest Period from that which applied to the last preceding Interest Period, the Margin relating to the relevant Interest Period, in place of the Margin relating to that last preceding Interest Period).

(2) For the purposes of this paragraph (E) only, the "**Interest Determination Date**" in respect of each Interest Period will be the day of the week in which the relevant Interest Period commences on which Treasury Bills would normally be auctioned. Treasury Bills are usually sold at auction on Monday of each week, unless that day is a legal holiday, in which case the auction is usually held on the following Tuesday, except that such auction may be held on the preceding Friday. If, as a result of a legal holiday, an auction is so held on the preceding Friday, such Friday will be the Interest Determination Date. If an auction date shall fall on the first day of an Interest Period, then, in respect of such Interest Period, the Treasury Bills Rate applicable to the Rate of Interest for the period up to (but excluding) the first Business Day immediately following such auction date will be the Treasury Bills Rate as determined at the last preceding Interest Determination Date, and thereafter the applicable Treasury Bills Rate shall be the Treasury Bills Rate determined on such Interest Determination Date.

(iii) Minimum and/or Maximum Interest Rate

If the applicable Pricing Supplement specifies a Minimum Interest Rate for any Interest Period, then, in the event that the Rate of Interest in respect of such Interest Period determined in accordance with the provisions of paragraph (ii) above is less than such Minimum Interest Rate, the Rate of Interest for such Interest Period shall be such Minimum Interest Rate. If the applicable Pricing Supplement specifies a Maximum Interest Rate for any Interest Period, then, in the event that the Rate of Interest in respect of such Interest Period determined in accordance with the provisions of paragraph (ii) above is greater than such Maximum Interest Rate, the Rate of Interest for such Interest Period shall be such Maximum Interest Rate.

(iv) Determination of Rate of Interest and Calculation of Interest Amounts

The Principal Paying Agent, in the case of Floating Rate Notes, and the Calculation Agent, in the case of Index Linked Interest Notes, will at or as soon as practicable after each time at which the Rate of Interest is to be determined, determine the Rate of Interest for the relevant Interest Period. In the case of Index Linked Interest Notes, the Calculation Agent will notify the Principal Paying Agent of the Rate of Interest for the relevant Interest Period as soon as practicable after calculating the same. See Clause 9.6 and Schedule 10 of the Agency Agreement.

The Principal Paying Agent will calculate the amount of interest (the "**Interest Amount**") payable on the Floating Rate Notes or Index Linked Interest Notes for the relevant Interest Period by applying the Rate of Interest to:

(A) in the case of Floating Rate Notes or Index Linked Interest Notes which are represented by a Global Note, the aggregate outstanding nominal amount of the Notes represented by such Global Note (or, if they are Partly Paid Notes, the aggregate amount paid up); or

(B) in the case of Floating Rate Notes or Index Linked Interest Notes in definitive form, the Calculation Amount;

and, in each case, multiplying such sum by the applicable Day Count Fraction, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such sub- unit being rounded upwards or otherwise in accordance with applicable market convention. Where the Specified Denomination of a Floating Rate Note or an Index Linked Interest Note in definitive form comprises more than one Calculation Amount, the Interest Amount payable in respect of such Note shall be the aggregate of the amounts (determined in the manner provided above) for each Calculation Amount comprising the Specified Denomination without any further rounding.

"**Day Count Fraction**" means, in respect of the calculation of an amount of interest for any Interest Period:

(1) if "**Actual/Actual (ISDA)**" or "**Actual/Actual**" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365 (or, if any portion of that Interest Period falls in a leap year, the sum of (A) the actual number of days in that portion of the Interest Period falling in a leap year divided by 366 and (B) the actual number of days in that portion of the Interest Period falling in a non-leap year divided by 365);

(2) if "**Actual/365 (Fixed)**" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365;

(3) if "**Actual/365 (Sterling)**" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365 or, in the case of an Interest Payment Date falling in a leap year, 366;

(4) if "**Actual/360**" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 360;

(5) if "**30/360**", "**360/360**" or "**Bond Basis**" is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y2 - Y1)] + [30 \times (M2 - M1)] + (D2 - D1)}{360}$$

where:

"**Y1**" is the year, expressed as a number, in which the first day of the Interest Period falls;

"**Y2**" is the year, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"**M1**" is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

"**M2**" is the calendar month, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"**D1**" is the first calendar day, expressed as a number, of the Interest Period, unless such number is 31, in which case D1 will be 30; and

"**D2**" is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless such number would be 31 and D1 is greater than 29, in which case D2 will be 30;

(6) if "**30E/360**" or "**Eurobond Basis**" is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y2 - Y1)] + [30 \times (M2 - M1)] + (D2 - D1)}{360}$$

where:

"**Y1**" is the year, expressed as a number, in which the first day of the Interest Period falls;

"**Y2**" is the year, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"**M1**" is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

"**M2**" is the calendar month, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"**D1**" is the first calendar day, expressed as a number, of the Interest Period, unless such number would be 31, in which case D1 will be 30; and

"**D2**" is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless such number would be 31, in which case D2 will be 30;

(7) if "**30E/360 (ISDA)**" is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y2 - Y1)] + [30 \times (M2 - M1)] + (D2 - D1)}{360}$$

where:

"**Y1**" is the year, expressed as a number, in which the first day of the Interest Period falls;

"**Y2**" is the year, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"**M1**" is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

"**M2**" is the calendar month, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"**D1**" is the first calendar day, expressed as a number, of the Interest Period, unless (i) that day is the last day of February or (ii) such number would be 31, in which case D1 will be 30; and

"**D2**" is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless (i) that day is the last day of February but not the Maturity Date or (ii) such number would be 31 and D2 will be 30.

(v) Notification of Rate of Interest and Interest Amounts

Provided that, if applicable, the Calculation Agent has notified the Principal Paying Agent, the Principal Paying Agent will cause the Rate of Interest and each Interest Amount for each Interest Period and the relevant Interest Payment Date to be notified to the Issuer, and the Issuer shall arrange for notice thereof to be notified to any stock exchange on which the relevant Floating Rate Notes or Index Linked Interest Notes are for the time being listed and to be published in accordance with Condition 17 as soon as practicable after their determination but in no event later than the fourth Relevant Business Day thereafter. Each Interest Amount and Interest Payment Date so notified may subsequently be amended (or appropriate alternative arrangements made by way of adjustment) without notice in the event of an extension or shortening of the Interest Period. Any such amendment will be promptly notified to each stock exchange on which the relevant Floating Rate Notes or Index Linked Interest Notes are for the time being listed and to the Noteholders in accordance with Condition 17. For the purposes of this paragraph, the expression "**Relevant Business Day**" means a day (other than a Saturday or a Sunday) on which banks and foreign exchange markets are open for general business in London or, if the specified currency is Renminbi, Hong Kong.

(vi) Certificates to be Final

All certificates, communications, opinions, determinations, calculations, quotations and decisions given, expressed, made or obtained for the purposes of the provisions of this Condition 6(b), whether by the Principal Paying Agent or, if applicable, the Calculation Agent, shall (in the absence of willful default, bad faith or manifest error) be binding on the Issuer, the Principal Paying Agent, the Registrar, the Calculation Agent (if applicable), the other Paying Agents and all Noteholders, Receiptholders and Couponholders and (in the absence as aforesaid) no liability to the Issuer, the Noteholders, the Receiptholders or the Couponholders shall attach to the Principal Paying Agent or the Calculation Agent (if applicable) in connection with the exercise or non-exercise by it of its powers, duties and discretions pursuant to provisions.

(vii) Effect of Benchmark Transition Event

(A) Benchmark Replacement

If the Issuer or its designee (as defined below) determines that a Benchmark Transition Event (as defined below) and its related Benchmark Replacement Date (as defined below) have occurred prior to the Reference Time (as defined below) in respect of any determination of the Benchmark (as defined below) on any date, the Benchmark Replacement (as defined below) will replace the then-current Benchmark for all purposes relating to the applicable Notes in respect of such determination on such date and all determinations on all subsequent dates.

(B) Benchmark Replacement Conforming Changes

In connection with the implementation of a Benchmark Replacement, the Issuer or its designee will have the right to make Benchmark Replacement Conforming Changes (as defined below) from time to time.

(C) Decisions and Determinations

Any determination, decision or election that may be made by the Issuer or its designee pursuant to this Condition 6(b)(vii), including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error, may be made in the Issuer or its designee's sole discretion, and, notwithstanding anything to the contrary in these Conditions, shall become effective with respect to the applicable Notes without consent from any other party.

(D) Certain Defined Terms

As used in this Condition 6(b)(vii):

"**Benchmark**" means, initially, LIBOR (if LIBOR is specified as the Reference Rate in the applicable Pricing Supplement); provided that if a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to LIBOR or the then-current Benchmark, then "Benchmark" means the applicable Benchmark Replacement.

"**Benchmark Replacement**" means the Interpolated Benchmark; provided that if the Issuer or its designee cannot determine the Interpolated Benchmark as of the Benchmark Replacement Date, then "Benchmark Replacement" means the first alternative set forth in the order below that can be determined by the Issuer or its designee as of the Benchmark Replacement Date:

(1) the sum of: (x) Term SOFR and (y) the Benchmark Replacement Adjustment;

(2) the sum of: (x) Compounded SOFR and (y) the Benchmark Replacement Adjustment;

(3) the sum of: (x) the alternate rate of interest that has been selected or recommended by the Relevant Governmental Body as the replacement for the then-current Benchmark for the applicable Corresponding Tenor and (y) the Benchmark Replacement Adjustment;

(4) the sum of: (x) the ISDA Fallback Rate and (y) the Benchmark Replacement Adjustment;

(5) the sum of: (x) the alternate rate of interest that has been selected by the Issuer or its designee as the replacement for the then-current Benchmark for the applicable Corresponding Tenor giving due consideration to any industry-accepted rate of interest as a replacement for the then-current Benchmark for U.S. dollar- denominated floating rate notes at such time and (y) the Benchmark Replacement Adjustment.

“**Benchmark Replacement Adjustment**” means the first alternative set forth in the order below that can be determined by the Issuer or its designee as of the Benchmark Replacement Date:

(1) the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected or recommended by the Relevant Governmental Body for the applicable Unadjusted Benchmark Replacement;

(2) if the applicable Unadjusted Benchmark Replacement is equivalent to the ISDA Fallback Rate, then the ISDA Fallback Adjustment;

(3) the spread adjustment (which may be a positive or negative value or zero) that has been selected by the Issuer or its designee giving due consideration to any industry-accepted spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the then-current Benchmark with the applicable Unadjusted Benchmark Replacement for U.S. dollar-denominated floating rate notes at such time.

“**Benchmark Replacement Conforming Changes**” means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of “Interest Period,” timing and frequency of determining rates and making payments of interest, changes to the definition of “Corresponding Tenor” solely when such tenor is longer than the Interest Period and other administrative matters) with respect to these Conditions that the Issuer or its designee decides may be appropriate to reflect the adoption of such Benchmark Replacement in a manner substantially consistent with market practice (or, if the Issuer or its designee decides that adoption of any portion of such market practice is not administratively feasible or if the Issuer or its designee determines that no market practice for use of the Benchmark Replacement exists, in such other manner as the Issuer or its designee determines is reasonably necessary).

“**Benchmark Replacement Date**” means the earliest to occur of the following events with respect to the then-current Benchmark:

(1) in the case of clause (1) or (2) of the definition of “Benchmark Transition Event,” the later of (x) the date of the public statement or publication of information referenced therein and (y) the date on which the administrator of the Benchmark permanently or indefinitely ceases to provide the Benchmark; or

(2) in the case of clause (3) of the definition of “Benchmark Transition Event,” the date of the public statement or publication of information referenced therein.

For the avoidance of doubt, if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination.

“**Benchmark Transition Event**” means the occurrence of one or more of the following events with respect to the then-current Benchmark:

(1) a public statement or publication of information by or on behalf of the administrator of the Benchmark announcing that such administrator has ceased or will cease to provide the Benchmark, permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark;

(2) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark, the central bank for the currency of the Benchmark, an insolvency official with jurisdiction over the administrator for the Benchmark, a resolution authority with jurisdiction over the administrator for the Benchmark or a court or an entity with similar insolvency or resolution authority over the administrator for the Benchmark, which states that the administrator of the Benchmark has ceased or will cease to provide the Benchmark permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark; or

(3) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark announcing that the Benchmark is no longer representative.

"**Compounded SOFR**" means the compounded average of SOFRs for the applicable Corresponding Tenor, with the rate, or methodology for this rate, and conventions for this rate (which will be compounded in arrears with a lookback and/or suspension period as a mechanism to determine the interest amount payable prior to the end of each Interest Period) being established by the Issuer or its designee in accordance with:

(1) the rate, or methodology for this rate, and conventions for this rate selected or recommended by the Relevant Governmental Body for determining compounded SOFR; provided that:

(2) if, and to the extent that, the issuer or its designee determines that Compounded SOFR cannot be determined in accordance with clause (1) above, then the rate, or methodology for this rate, and conventions for this rate that have been selected by the issuer or its designee giving due consideration to any industry-accepted market practice for U.S. dollar-denominated floating rate notes at such time.

"**Corresponding Tenor**" with respect to a Benchmark Replacement means a tenor (including overnight) having approximately the same length (disregarding business day adjustment) as the applicable tenor for the then-current Benchmark.

"**designee**" means a designee as selected and separately appointed by the Issuer in writing.

"**Federal Reserve Bank of New York's Website**" means the website of the Federal Reserve Bank of New York at http://www.newyorkfed.org, or any successor source.

"**Interpolated Benchmark**" with respect to the Benchmark means the rate determined for the Corresponding Tenor by interpolating on a linear basis between: (x) the Benchmark for the longest period (for which the Benchmark is available) that is shorter than the Corresponding Tenor and (y) the Benchmark for the shortest period (for which the Benchmark is available) that is longer than the Corresponding Tenor.

"**ISDA Definitions**" means the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time.

"**ISDA Fallback Adjustment**" means the spread adjustment, (which may be a positive or negative value or zero) that would apply for derivatives transactions referencing the ISDA Definitions to be determined upon the occurrence of an index cessation event with respect to the Benchmark for the applicable tenor.

"**ISDA Fallback Rate**" means the rate that would apply for derivatives transactions referencing the ISDA Definitions to be effective upon the occurrence of an index cessation date with respect to the Benchmark for the applicable tenor excluding the applicable ISDA Fallback Adjustment.

"**Reference Time**" with respect to any determination of the Benchmark means (x) if the Benchmark is LIBOR, 11:00 a.m. (London time) on the day that is two London banking days preceding the date of such determination, and (y) if the Benchmark is not LIBOR, the time determined by the Issuer or its designee in accordance with the Benchmark Replacement Conforming Changes.

"**Relevant Governmental Body**" means the Federal Reserve Board and/or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York or any successor thereto.

"**SOFR**" with respect to any day means the secured overnight financing rate published for such day by the Federal Reserve Bank of New York, as the administrator of the benchmark, (or a successor administrator) on the Federal Reserve Bank of New York's Website.

"**Term SOFR**" means the forward-looking term rate for the applicable Corresponding Tenor based on SOFR that has been selected or recommended by the Relevant Governmental Body.

"**Unadjusted Benchmark Replacement**" means the Benchmark Replacement excluding the Benchmark Replacement Adjustment.

(c) Dual Currency Notes

In the case of Dual Currency Notes, if the rate or amount of interest falls to be determined by reference to an exchange rate, the rate or amount of interest payable shall be determined in the manner specified in the applicable Pricing Supplement.

(d) Partly Paid Notes

In the case of Partly Paid Notes (other than Partly Paid Notes which are Zero Coupon Notes), interest will accrue as aforesaid on the paid-up nominal amount of such Notes and otherwise as specified in the applicable Pricing Supplement.

(e) Accrual of Interest

Each Note (or in the case of the redemption of part only of a Note, that part only of such Note) will cease to bear interest (if any) from the date for its redemption unless, upon due presentation thereof, payment of principal is improperly withheld or refused. In such event, interest will continue to accrue (before, as well as after, judgment) until whichever is the earlier of:

(1) the date on which all amounts due in respect of such Note have been paid; and

(2) the date on which the full amount of the moneys payable has been received by the Agent and notice to that effect has been given in accordance with Condition 17.

7. Payments

(a) Method of Payment

Subject as provided below:

(i) payments in a Specified Currency other than Euro will be made by credit or transfer to an account in the relevant Specified Currency (which, in the case of a payment in Yen to a non-resident of Japan, shall be a non-resident account) maintained by the payee with a bank in the principal financial center of the country of such Specified Currency (which, if the Specified Currency is Australian dollars, New Zealand dollars or Renminbi, shall be Sydney, Auckland or Hong Kong, respectively); and

(ii) payments in Euro will be made by credit or transfer to a Euro account (or any other account to which Euro may be credited or transferred) specified by the payee.

Payments will be subject in all cases to (i) any fiscal or other laws and regulations applicable thereto in the place of payment, but without prejudice to the provisions of Condition 10, and (ii) any withholding or deduction required pursuant to an agreement described in Section 1471(b) of the U.S. Internal Revenue Code of 1986, as amended (the "**Code**") or otherwise imposed pursuant to Sections 1471 through 1474 of the Code, any regulations or agreements thereunder, official interpretations thereof, or any law implementing an intergovernmental approach thereto ("**FATCA**"). References to "**Specified Currency**" will include any successor currency under applicable law.

(b) Payments in respect of Definitive Bearer Notes, Receipts and Coupons

Payments of principal in respect of definitive Bearer Notes not held in the CMU Service will (subject as provided below) be made in the manner provided in paragraph (a) above only against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of definitive Bearer Notes, and payments of interest in respect of definitive Bearer Notes will (subject as provided below) be made as aforesaid only against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of Coupons, in each case at the specified office of any Paying Agent outside the United States (which expression, as used herein, means the United States of America (including the States and the District of Columbia, its territories, its possessions and other areas subject to its jurisdiction)) and in each case payments will not be made by a transfer of funds to an account maintained by the payee in the United States or mailed to an address in the United States.

Notwithstanding the foregoing, if any amount of principal and/or interest in respect of any Bearer Notes is payable in U.S. dollars, such U.S. dollar payments of principal and/or interest in respect of the Bearer Notes will be made at the specified office of a Paying Agent in the United States if:

(i) the Issuer has appointed Paying Agents with specified offices outside the United States with the reasonable expectation that such Paying Agents would be able to make payment in U.S. dollars at such specified offices outside the United States of the full amount of principal and interest on the Bearer Notes in the manner provided above when due;

(ii) payment of the full amount of such principal and interest at all such specified offices outside the United States is illegal or effectively precluded by exchange controls or other similar restrictions on the full payment or receipt of principal and interest in U.S. dollars; and

(iii) such payment is then permitted under United States law without involving, in the opinion of the Issuer, adverse tax consequences to the Issuer.

Payments of installments of principal (if any) in respect of definitive Bearer Notes not held in the CMU Service, other than the final installment, will (subject as provided below) be made in the manner provided in paragraph (a) above against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the relevant Receipt in accordance with the preceding paragraph. Payment of the final installment will be made in the manner provided in paragraph (a) above only against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the relevant Bearer Note in accordance with the preceding paragraph. Each Receipt must be presented for payment of the relevant installment together with the definitive Bearer Note to which it appertains. Receipts presented without the definitive Bearer Note to which they appertain do not constitute valid obligations of the Issuer. Upon the date on which any Bearer definitive Note becomes due and repayable, unmatured Receipts (if any) relating thereto (whether or not attached) shall become void and no payment shall be made in respect thereof.

Fixed Rate Notes in definitive Bearer form (other than Dual Currency Notes or Index Linked Redemption Notes or Long Maturity Notes (as defined below)) should be presented for payment together with all unmatured Coupons appertaining thereto (which expression shall for this purpose include Coupons falling to be issued on exchange of matured Talons), failing which the amount of any missing unmatured Coupon (or, in the case of payment not being made in full, the same proportion of the amount of such missing unmatured Coupon as the sum so paid bears to the sum due) will be deducted from the sum due for payment. Each amount of principal so deducted will be paid in the manner mentioned above against surrender of the relative missing Coupon at any time before the expiry of 10 years after the Relevant Date (as defined in Condition 10) in respect of such principal (whether or not such Coupon would otherwise have become void under Condition 11) or, if later, five years from the date on which such Coupon would otherwise have become due, but in no event thereafter.

Upon any Fixed Rate Note in definitive bearer form becoming due and repayable prior to its Maturity Date, all unmatured Talons (if any) appertaining thereto will become void and no further Coupons will be issued in respect thereof.

Upon the date on which any Floating Rate Note, Dual Currency Note or Index Linked Note or Long Maturity Note in definitive Bearer form not held in the CMU Service becomes due and repayable, unmatured Coupons and Talons (if any) relating thereto (whether or not attached) shall become void and no payment or, as the case may be, exchange for further Coupons shall be made in respect thereof. A "**Long Maturity Note**" is a Fixed Rate Note (other than a Fixed Rate Note which on issue had a Talon attached) whose nominal amount on issue is less than the aggregate interest payable thereon *provided that* such Note shall cease to be a Long Maturity Note on the Interest Payment Date on which the aggregate amount of interest remaining to be paid after that date is less than the nominal amount of such Note.

In the case of definitive Bearer Notes held in the CMU Service, payment will be made at the direction of the bearer to the CMU Accountholders and such payment made in accordance thereof shall discharge the obligations of the Issuer in respect of that payment.

If the due date for redemption of any definitive Bearer Note is not a Fixed Interest Date or an Interest Payment Date, interest (if any) accrued in respect of such Note from (and including) the preceding Fixed Interest Date or Interest Payment Date or, as the case may be, the Interest Commencement Date shall be payable only against surrender of the relevant definitive Bearer Note.

(c) Payments in respect of Bearer Global Notes

Payments of principal and interest (if any) in respect of Bearer Notes represented by any Bearer Global Note will (subject as provided below) be made in the manner provided in paragraph (a) above and otherwise in the manner specified in the relevant Bearer Global Note (i) in the case of a Bearer Global Note lodged with the CMU Service, at the direction of the bearer to the CMU Accountholders, or (ii) in the case of a Bearer Global Note not lodged with the CMU Service, against presentation or surrender, as the case may be, of such Bearer Global Note at the specified office of any Paying Agent outside the United States. A record of each payment made against presentation or surrender of such Bearer Global Note, distinguishing between any payment of principal and any payment of interest, will be made on such Bearer Global Note (in the case of a Bearer Global Note not lodged with the CMU Service) by such Paying Agent or in the records of Euroclear and Clearstream, as applicable or (in the case of a Bearer Global Note lodged with the CMU Service) on withdrawal of such Bearer Global Note by the CMU Lodging Agent, and in such case such record shall be prima facie evidence that the payment in question has been made.

(d) Payments in respect of Registered Notes

Payments of principal (other than installments of principal (if any) prior to the final installments) in respect of each Registered Note (whether in definitive or global form) will be made against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the Registered Note at the specified office of the Registrar, any of the Paying Agents or, in the case of CMU Notes, the CMU Lodging Agent. Such payments will be made by transfer to the Designated Account (as defined below) of the holder (or the first named of joint holders) of the Registered Note appearing in the register of holders of the Registered Notes maintained by the Registrar (the "**Register**") (i) where in global form, at the close of the business day (being for this purpose (x) in respect of Notes clearing through Euroclear and/or Clearstream, a day on which Euroclear and/or Clearstream are open for business, (y) in respect of Notes clearing through the CMU Service, a day on which the CMU Service is open for business, and (z) in respect of Notes clearing through the DTC, a day on which the DTC is open for business) immediately prior to the relevant due date, and (ii) where in definitive form, at the close of business on the third business day (being for this purpose a day on which banks are open for business in the city where the specified office of the Registrar is located) prior to the relevant due date. For these purposes, "**Designated Account**" means the account (which, in the case of a payment in Yen to a non-resident of Japan, shall be a non-resident account) maintained by a holder with a Designated Bank and identified as such in the Register and "**Designated Bank**" means (in the case of payment in a Specified Currency other than Euro) a bank in the principal financial center of the country of such Specified Currency (which, if the Specified Currency is Australian dollars, New Zealand dollars or Renminbi, shall be Melbourne, Wellington or Hong Kong, respectively) and (in the case of a payment in Euro) any bank which processes payments in Euro.

Payment will be made by transfer on the due date in the manner provided in the preceding paragraph for all payments of interest (other than interest due on redemption) and installments of principal (other than the final installment) in respect of the Registered Notes which become payable to the holder. Payment of the interest due in respect of each Registered Note on redemption and the final installment of principal will be made in the same manner as payment of the principal amount of such Registered Note.

All amounts payable to DTC or its nominee as registered holder of a Registered Global Note in respect of Notes denominated in a Specified Currency other than U.S. dollars shall be paid by transfer by the Registrar to an account of the Exchange Agent in the relevant Specified Currency on behalf of DTC or its nominee for payment in such Specified Currency or conversion into U.S. dollars in accordance with the provisions of the Agency Agreement.

In the case of Registered Notes (whether or not in global form) held in the CMU Service, payment of all amounts payable to the CMU Service or its sub-custodian as registered holder of a Registered Note (whether or not in global form) will be made at the direction of the registered holder to the CMU Accountholders and such payment shall discharge the obligations of the Issuer in respect of that payment.

None of the Issuer or the Agents will have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

(e) General provisions applicable to payments

The holder of a Global Note (if the Global Note is not lodged with the CMU Service), or the CMU Accountholder at the direction of the holder of a Global Note (if the Global Note is lodged with the CMU Service), shall be the only person entitled to receive payments in respect of Notes represented by such Global Note and the Issuer will be discharged by payment to, or to the order of, the holder of such Global Note in respect of each amount so paid. Each of the persons shown in the records of Euroclear, Clearstream, the CMU Service or DTC as the beneficial holder of a particular nominal amount of Notes represented by such Global Note must look solely to Euroclear, Clearstream, the CMU Service or DTC, as the case may be, for his share of each payment so made by the Issuer to, or to the order of, the holder of such Global Note. No person other than the holder of such Global Note shall have any claim against the Issuer in respect of any payments due on such Global Note.

(f) Payment Day

If the date for payment of any amount in respect of any Note, Receipt or Coupon is not a Payment Day, the holder thereof shall not be entitled to payment until the next following Payment Day in the relevant place and shall not be entitled to further interest or other payment in respect of such delay. For these purposes "**Payment Day**" means any day which (subject to Condition 11) is:

(i) a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in

(A) in the case of Notes in definitive form only, the relevant place of presentation;

(B) each Additional Financial Center specified in the applicable Pricing Supplement; and

(ii) either (A) in relation to any sum payable in a Specified Currency other than Euro, a day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in the principal financial center of the country of the relevant Specified Currency (and which if the Specified Currency is Australian dollars, New Zealand dollars or Renminbi shall be Melbourne, Wellington or Hong Kong, respectively); or (B) in relation to any sum payable in Euro, a day on which the TARGET 2 System is open; and/or

(iii) in relation to any sum payable in a Specified Country and/or one or more Additional Financial Centers specified in the applicable Pricing Supplement, a day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in the Additional Financial Centers or, if no currency is indicated, generally in each of the Additional Financial Centers; and/or

(iv) in the case of any payment in respect of a Registered Global Note denominated in a Specified Currency other than U.S. dollars and registered in the name of DTC or its nominee and in respect of which an accountholder of DTC (with an interest in such Registered Global Note) has elected to receive any part of such payment in U.S. dollars, a day on which commercial banks are not authorized or required by law or regulation to be closed in New York City.

(g) Interpretation of Principal and Interest

Any reference in these Terms and Conditions to principal in respect of the Notes shall be deemed to include, as applicable:

(i) any additional amounts which may be payable with respect to principal under Condition 10;

(ii) the Final Redemption Amount of the Notes;

(iii) the Early Redemption Amount of the Notes;

(iv) the Optional Redemption Amount(s) (if any) of the Notes;

(v) in relation to Notes redeemable in installments, the Installment Amounts;

(vi) in relation to Zero Coupon Notes, the Amortized Face Amount; and

(vii) any premium and any other amounts (other than interest) which may be payable by the Issuer under or in respect of the Notes.

Any reference in these Terms and Conditions to interest in respect of the Notes shall be deemed to include, as applicable, any additional amounts which may be payable with respect to interest under Condition 10.

(h) Renminbi Currency Event

If "**Renminbi Currency Event**" is specified in the applicable Pricing Supplement and an Renminbi Currency Event, as determined by the Issuer acting in good faith, exists on a date for payment of any amount in respect of any Note, Receipt or Coupon, the Issuer's obligation to make a payment in Renminbi under the terms of the Notes may be replaced by an obligation to pay such amount in the Relevant Currency (selected by the Issuer, if applicable, and converted at the Alternate Settlement Rate as of a time selected by the Alternate Settlement Rate Determination Agent as specified in the applicable Pricing Supplement).

Upon the occurrence of an Renminbi Currency Event, the Issuer shall give notice not less than five nor more than 30 days prior to the due date for payment to the Noteholders in accordance with Condition 17 stating the occurrence of the Renminbi Currency Event, giving details thereof and the action proposed to be taken in relation thereto.

For the purposes of this Condition 7(h) and unless stated otherwise in the applicable Pricing Supplement:

"**Alternate Settlement Rate**" means the spot rate, determined by the Alternate Settlement Rate Determination Agent, between Renminbi and the Relevant Currency, taking into consideration all available information which the Alternate Settlement Rate Determination Agent deems relevant (including, but not limited to, the pricing information obtained from the Renminbi non-deliverable market outside the PRC and/or the Renminbi exchange market within the People's Republic of China);

"**Governmental Authority**" means any de facto or de jure government (or any agency or instrumentality thereof), court, tribunal, administrative or other governmental authority or any other entity (private or public) charged with the regulation of the financial markets (including the central bank) of Hong Kong;

"**Relevant Currency**" means United States dollars or such other currency as may be specified in the applicable Pricing Supplement;

"**Renminbi Currency Event**" means any one of Renminbi Illiquidity, Renminbi Non-Transferability and Renminbi Inconvertibility;

"**Renminbi Illiquidity**" means the general Renminbi exchange market in Hong Kong becoming illiquid as a result of which the Issuer cannot obtain sufficient Renminbi in order to satisfy its obligation to pay interest or principal (in whole or in part) in respect of the Notes, as determined by the Issuer acting in good faith and in a commercially reasonable manner following consultation with two independent foreign exchange dealers of international repute active in the Renminbi exchange market in Hong Kong;

"**Renminbi Inconvertibility**" means the occurrence of any event that makes it impossible for the Issuer to convert any amount due in respect of the Notes in the general Renminbi exchange market in Hong Kong, other than where such impossibility is due solely to the failure of the Issuer to comply with any law, rule or regulation enacted by any Governmental Authority (unless such law, rule or regulation is enacted after the Issue Date of the first Tranche of the relevant Series and it is impossible for the Issuer, due to an event beyond the control of the Issuer, to comply with such law, rule or regulation); and

"**Renminbi Non-Transferability**" means the occurrence of any event that makes it impossible for the Issuer to deliver Renminbi between accounts inside Hong Kong or from an account inside Hong Kong to an account outside Hong Kong or from an account outside Hong Kong to an account inside Hong Kong (including where the Renminbi clearing and settlement system for participating banks in Hong Kong is disrupted or suspended), other than where such impossibility is due solely to the failure of the Issuer to comply with any law, rule or regulation enacted by any Governmental Authority (unless such law, rule or regulation is enacted after the Issue Date of the first Tranche of the relevant Series and it is impossible for the Issuer due to an event beyond the control of the Issuer, to comply with such law, rule or regulation).

Any reference in these Terms and Conditions to interest in respect of the Notes shall be deemed to include, as applicable, any additional amounts which may be payable with respect to interest under Condition 10.

8. Redemption and Purchase

(a) At Maturity

Unless previously redeemed or purchased and canceled as specified below, each Note (including each Index Linked Redemption Note and Dual Currency Redemption Notes) will be redeemed by the Issuer at its Final Redemption Amount specified in, or determined in the manner specified in, the applicable Pricing Supplement in the relevant Specified Currency on the Maturity Date.

(b) Redemption for Tax Reasons

The Notes of a Series may be redeemed at the option of the Issuer in whole, but not in part, at any time (if this Note is neither a Floating Rate Note, an Index Linked Interest Note nor a Dual Currency Interest Note) or on any Interest Payment Date (if this Note is either a Floating Rate Note, an Index Linked Interest Note or a Dual Currency Interest Note), on giving not less than 30 nor more than 60 days' notice to the Principal Paying Agent and, in accordance with Condition 17, the Noteholders (which notice shall be irrevocable), if:

(i) on the occasion of the next payment due under the Notes, the Issuer has or will become obliged to pay additional amounts as provided or referred to in Condition 10 as a result of any change in, or amendment to, the laws or regulations of Korea or, if the Issuer is acting through a particular branch (as specified in the applicable Pricing Supplement (the "**Specified Branch**")), the country where that branch is located (the "**Specified Country**"), or any political subdivision or any authority thereof or therein having power to tax, or any change in the application or official interpretation of such laws or regulations (including the cessation of tax exemptions presently applicable), or any execution of, or amendment to, any treaty or treaties affecting taxation to which Korea is a party, which change or amendment becomes effective on or after the Issue Date of the relevant Tranche of the Notes; and

(ii) such obligation cannot be avoided by the Issuer taking reasonable measures available to it, provided (1) in the case of Subordinated Notes, the prior approval of the FSS or such other relevant regulatory authorities in Korea shall have been obtained, if necessary, and (2) that no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which the Issuer would be obliged to pay such additional amounts were a payment in respect of the Notes then due.

Prior to the publication of any notice of redemption pursuant to this Condition, the Issuer shall deliver to the Principal Paying Agent a certificate signed by two authorized officers of the Issuer stating that the Issuer is entitled to effect such redemption and setting forth a statement of facts showing that the conditions precedent to the right of the Issuer so to redeem have occurred, and an opinion of an independent legal adviser of recognized standing to the effect that the Issuer has or will become obliged to pay such additional amounts as a result of such change or amendment.

Notes redeemed pursuant to this Condition 8(b) will be redeemed at their Early Redemption Amount referred to in paragraph (e) below together (if appropriate) with interest accrued to (but excluding) the date of redemption.

(c) Redemption at the Option of the Issuer (Issuer Call)

If the Issuer is specified in the applicable Pricing Supplement as having an option to redeem, the Issuer may, having given:

(i) not less than 15 nor more than 30 days' notice to the Noteholders in accordance with Condition 17; and

(ii) not less than 15 days before the giving of the notice referred to in (i), notice to the Principal Paying Agent and, in the case of a redemption of Registered Notes, the Registrar;

(which notices shall be irrevocable and shall specify the date fixed for redemption), redeem all or some only of the Notes then outstanding on any Optional Redemption Date and at the Optional Redemption Amount(s) specified in, or determined in the manner specified in, the applicable Pricing Supplement together, if appropriate, with interest accrued to (but excluding) the relevant Optional Redemption Date; provided, however, that in the case of Subordinated Notes, such redemption shall not be made within 5 years after the issuance date of such Notes, and shall be subject to the prior approval of the FSS pursuant to the Detailed Regulations on the Supervision of the Banking Business of Korea in effect at the applicable time relating to, *inter alia*, capital adequacy ratios, replacement capital and interest rates. Any such redemption must be of a nominal amount not less than the Minimum Redemption Amount and not more than the Maximum Redemption Amount in each case as may be specified in the applicable Pricing Supplement. In the case of a partial redemption of definitive Notes, the Notes to be redeemed will be selected individually by lot (in such place as the Principal Paying Agent may approve and in such manner as the Principal Paying Agent shall deem to be appropriate and fair) not more than 30 days prior to the date fixed for redemption (such date of selection, the "**Selection Date**") and a list of the notes called for redemption will be published in accordance with Condition 17 not less than 30 days prior to such date. In the case of a partial redemption of Notes represented by a Global Note, the relevant interests in the Notes to be redeemed will be selected in accordance with the rules of Euroclear and/or Clearstream (to be reflected in the records of Euroclear and Clearstream as either a pool factor or a reduction in nominal amount, at their discretion) and/or DTC and/or the CMU Service.

In the case of Redeemed Notes represented by definitive Notes, a list of the serial numbers of such Redeemed Notes will be published in accordance with Condition 17 not less than 15 days prior to the date fixed for redemption. The aggregate nominal amount of Redeemed Notes represented by definitive Notes shall bear the same proportion to the aggregate nominal amount of all Redeemed Notes as the aggregate nominal amount of definitive Notes outstanding bears to the aggregate nominal amount of the Notes outstanding, in each case on the Selection Date, *provided that*, such first mentioned nominal amount shall, if necessary, be rounded downwards to the nearest integral multiple of the Specified Denomination, and the aggregate nominal amount of Redeemed Notes represented by a Global Note shall be equal to the balance of the Redeemed Notes. No exchange of the relevant Global Note will be permitted during the period from and including the Selection Date to and including the date fixed for redemption pursuant to this sub-paragraph (c) and notice to that effect shall be given by the Issuer to the Noteholders in accordance with Condition 17 at least five days prior to the Selection Date.

(d) Redemption of the Senior Notes only at the Option of the Noteholders (Investor Put)

If the holders of Senior Notes are specified in the applicable Pricing Supplement as having an option to redeem, upon the holder of any Senior Note giving to the Issuer in accordance with Condition 17 not less than 15 nor more than 30 days' notice or such other period of notice as is specified in the applicable Pricing Supplement, the Issuer will, upon the expiry of such notice, redeem, subject to, and in accordance with, the terms specified in the applicable Pricing Supplement, in whole (but not in part), such Senior Note on the Optional Redemption Date and at the Optional Redemption Amount specified in, or determined in the manner specified in, the applicable Pricing Supplement together, if appropriate, with interest accrued to (but excluding) the Optional Redemption Date. Registered Notes may be redeemed under this Condition 8(d) (*Redemption and Purchase — Redemption of the Senior Notes Only at the Option of the Noteholders (Investor Put)*) in any multiple of their lowest Specified Denomination.

If the Senior Note to be redeemed is in definitive form and is not held through Euroclear, Clearstream, DTC or the CMU Service, to exercise the right to require redemption of such Senior Note the holder of such Senior Note must deliver such Senior Note at the specified office of any Paying Agent (in the case of a Bearer Note) or any Transfer Agent (in the case of a Registered Note) at any time during normal business hours of such Paying Agent or Transfer Agent, as the case may be, falling within the notice period, accompanied by a duly completed and signed notice of exercise in the form (for the time being current) obtainable from any specified office of any Paying Agent or Transfer Agent (a "**Put Notice**") and in which the holder must specify a bank account to which payment is to be made under this Condition and, in the case of Registered Notes, the nominal amount thereof to be redeemed and, if less than the full nominal amount of the Registered Notes so surrendered is to be redeemed, an address to which a new Registered Note in respect of the balance of such Registered Notes is to be sent subject to and in accordance with the provisions of Condition 2 (*Transfers of Registered Notes*).

If the Senior Note to be redeemed is represented by a Global Note or is in definitive form and held through Euroclear, Clearstream, DTC or the CMU Service, to exercise the right to require redemption of such Senior Note, the holder of such Senior Note must, within the notice period, give notice to the Principal Paying Agent (in the case of Bearer Notes) or the Registrar (in the case of Registered Notes) of such exercise in accordance with the standard procedures of Euroclear, Clearstream, DTC and the CMU Service (which may include notice being given on such holder's instruction by Euroclear, Clearstream, DTC, the CMU Service or any depositary, as the case may be, for them to the Principal Paying Agent (in the case of Bearer Notes) or the Registrar (in the case of Registered Notes) by electronic means or notice given to the CMU Lodging Agent) in a form acceptable to Euroclear, Clearstream, DTC, the CMU Service and the CMU Lodging Agent from time to time and, if such Senior Note is represented by a Global Note, at the same time present or procure the presentation of the relevant Global Note to the Principal Paying Agent (in the case of Bearer Notes) or the Registrar (in the case of Registered Notes) or the CMU Lodging Agent, as the case may be, for notation accordingly.

If this Senior Note is in definitive form, the Put Notice must be accompanied by this Senior Note or evidence satisfactory to the Paying Agent concerned that this Senior Note will, following delivery of the Put Notice, be held to its order or under its control.

Any Put Notice given by a holder of any Senior Note pursuant to this paragraph shall be irrevocable except where prior to the due date of redemption an Event of Default shall have occurred and be continuing in which event such holder, at its option, may elect by notice to the Issuer to withdraw the notice given pursuant to this paragraph and instead to declare such Senior Note forthwith due and payable pursuant to Condition 12.

Each Senior Note should be presented for redemption together with all unmatured Coupons relating to it, failing which such Senior Note will be redeemed only against provision of such indemnity as the Issuer may require. Upon the date on which any Senior Note falls due for redemption or is purchased for cancellation, all unmatured Coupons appertaining thereto will become void and no payment will thereafter be made in respect thereto.

(e) Early Redemption Amounts

For the purpose of Condition 8(b) and Condition 12, the Notes will be redeemed at the Early Redemption Amount calculated as follows:

(i) in the case of Notes with a Final Redemption Amount equal to the Issue Price, at the Final Redemption Amount thereof;

(ii) in the case of Notes (other than Zero Coupon Notes but including Installment Notes and Partly Paid Notes) with a Final Redemption Amount which is or may be less or greater than the Issue Price or which is payable in a Specified Currency other than that in which the Notes are denominated, at the amount specified in, or determined in the manner specified in, the applicable Pricing Supplement or, if no such amount or manner is so specified in the Pricing Supplement, at their nominal amount; or

(iii) in the case of Zero Coupon Notes, at an amount (the "**Amortized Face Amount**") equal to the sum of:

Early Redemption Amount = RP x (1 + AY) y where:

"**RP**" means the Reference Price; and

"**AY**" means the Accrual Yield expressed as a decimal; and

"**y**" is a fraction the numerator of which is equal to the number of days (calculated on the basis of a 360-day year consisting of 12 months of 30 days each) from (and including) the Issue Date of the first Tranche of the Notes to (but excluding) the date fixed for redemption or (as the case may be) the date upon which such Note becomes due and repayable and the denominator of which is 360.

Where such calculation is to be made for a period which is not a whole number of years, it shall be made on the basis of a 360-day year consisting of 12 months of 30 days each or such other calculation basis as may be specified in the applicable Pricing Supplement.

(f) Installments

If the Notes are repayable in installments, they will be redeemed in the Installment Amounts and on the Installment Dates. In the case of early redemption, the Early Redemption Amount will be determined pursuant to Condition 8(e).

(g) Partly Paid Notes

If the Notes are Partly Paid Notes, they will be redeemed, whether at maturity, early redemption or otherwise, in accordance with the provisions of this Condition and the applicable Pricing Supplement.

(h) Purchases etc.

The Issuer may at any time purchase Senior Notes at any price (*provided that*, in the case of Bearer Notes in definitive form, these are purchased together with all unmatured Receipts, Coupons and Talons appertaining thereto) in the open market or otherwise. Such Notes may be held, reissued, resold or, at the option of the Issuer, surrendered to any Paying Agent, the Registrar or the CMU Lodging Agent, as the case may be, for cancellation. If purchases are made by tender, tenders must be made available to all holders of Notes of this Series on the same terms. In case of the Subordinated Notes, the Issuer and any person or entity over which the Issuer exercises substantial control including any affiliated company or subsidiary of the Issuer (the "**Issuer Related Party**") shall not purchase the Subordinated Notes nor provide, directly or indirectly, the fund to acquire the Subordinated Notes by providing any collateral, guaranty or loan in favor of the person or entity which will acquire such Notes. In addition, neither the Issuer nor any Issuer Related Party shall enhance, legally or economically, the payment seniority of the Subordinated Notes, nor provide, directly or indirectly through its affiliated company or subsidiary, any collateral or guaranty in favor of the person or entity which acquires such Notes.

(i) Cancellation

All Notes which are redeemed will forthwith be canceled (together with all unmatured Receipts, Coupons and Talons attached thereto or surrendered therewith at the time of redemption). All Notes so canceled and the Notes purchased and canceled pursuant to Condition 8(h) (together with all unmatured Receipts and Coupons and Talons canceled therewith) shall be forwarded to the Principal Paying Agent (which shall notify the Registrar of such canceled Notes in the case of Registered Notes) and cannot be reissued or resold.

(j) Late payment on Zero Coupon Notes

If the amount payable in respect of any Zero Coupon Note upon redemption of such Zero Coupon Note pursuant to Condition 8(a), 8(b), 8(c) or 8(d) above or upon its becoming due and repayable as provided in Condition 10 is improperly withheld or refused, the amount due and repayable in respect of such Zero Coupon Note shall be the amount calculated as provided in Condition 8(e)(iii) above as though the references therein to the date fixed for the redemption or the date upon which such Zero Coupon Note becomes due and payable were replaced by references to the date which is the earlier of:

(i) the date on which all amounts due in respect of such Zero Coupon Note have been paid; and

(ii) the date on which the full amount of the moneys payable has been received by the Principal Paying Agent, the Registrar or the CMU Lodging Agent, as the case may be, and notice to that effect has been given to the Noteholders either in accordance with Condition 17 or individually.

(k) Obligation to redeem

Upon the expiry of any notice as is referred to in Condition 8(b), 8(c) or 8(d), the Issuer shall be bound to redeem the Notes to which the notice referred at the relevant redemption price applicable at the date of such redemption together with, if appropriate, interest accrued to (but excluding) the relevant redemption date.

9. Loss Absorption upon a Trigger Event in respect of Subordinated Notes

(a) Write-off on a Trigger Event

With respect to any Subordinated Notes, effective as of third Korean Business Day from the occurrence of a Trigger Event, each Subordinated Note, including the then outstanding principal amount thereof and any accrued but unpaid interest thereon, shall be irrevocably canceled in whole, without the need for the consent of the holders of the Subordinated Notes (such cancellation being referred to herein as a "**Write-off**", and "**Written-off**" shall be construed accordingly). Once the principal amount of, and any accrued but unpaid interest under, the Subordinated Notes have been Written-off, such amounts will not be restored in any circumstances, including where the relevant Trigger Event ceases to continue.

The Issuer shall provide a Trigger Event Notice to the holders of the Subordinated Notes, but the Write-off shall be effective irrespective of whether the Issuer has provided such Trigger Event Notice.

For the avoidance of doubt, any Write-off pursuant to this Condition 9(a) will not constitute an Event of Default under the Notes.

(b) Definitions

In these conditions and unless stated otherwise in the applicable Pricing Supplement:

"**Korean Business Day**" means a day (other than a Saturday or Sunday) on which banks and foreign exchange markets are open for business in Seoul, Korea;

"**Trigger Event**" means the designation of the Issuer as an "insolvent financial institution" pursuant to the Act on the Structural Improvement of the Financial Industry of Korea; and

"**Trigger Event Notice**" means the notice specifying that a Trigger Event has occurred, which shall be issued by the Issuer not more than two Korean Business Days after the occurrence of a Trigger Event to the holders of the Subordinated Notes and the Principal Paying Agent in accordance with Condition 17 and which shall state in reasonable detail the nature of the relevant Trigger Event.

10. Taxation

All payments of principal and interest in respect of the Notes, Receipts and Coupons by the Issuer will be made without withholding or deduction for or on account of any present or future taxes or duties of whatever nature imposed or levied by or on behalf of any Tax Jurisdiction unless such withholding or deduction is required by law. In such event, the Issuer will pay such additional amounts as shall be necessary in order that the net amounts received by the holders of the Notes, Receipts or Coupons after such withholding or deduction shall equal the respective amounts of principal and interest which would otherwise have been receivable in respect of the Notes, Receipts or Coupons, as the case may be, in the absence of such withholding or deduction; except that no such additional amounts shall be payable with respect to any Note, Receipt or Coupon:

(i) presented for payment (where presentation is required) in Korea (provided the Notes, Receipt or Coupon can also be presented at an office of a Paying Agent outside Korea); or

(ii) where such withholding or deduction is imposed on a payment received by or on behalf of a holder of a Note, Receipt or Coupon who is liable for such taxes or duties in respect of such Note, Receipt or Coupon by reason of such holder (or fiduciary, settlor, beneficiary, member or shareholder of, or possessor of power over the relevant holder, if the relevant holder is an estate, nominee, trust or corporation) being or having been connected with a Tax Jurisdiction (as defined below) otherwise than merely by holding such Note, Receipt or Coupon; or

(iii) presented for payment (where presentation is required) more than 30 days after the Relevant Date (as defined below) except to the extent that the holder thereof would have been entitled to an additional amount on presenting the same for payment on such thirtieth day (assuming that day to have been a Payment Day (as defined in Condition 7(f) Payments — Payment Day)); or

(iv) where such withholding or deduction is imposed on a payment received by or on behalf of a holder of a Note, Receipt or Coupon who would have been able to avoid such withholding or deduction by presenting (where presentation is required) the relevant Note, Receipt or Coupon to another Paying Agent in a Member State of the European Union; or

(v) where such withholding or deduction is imposed on a payment received by or on behalf of a holder of a Note, Receipt or Coupon who would have been able to avoid such withholding or deduction by making a declaration of non-residence or other similar claim for exemption and does not make such declaration or claim; or

(vi) where such withholding or deduction is imposed pursuant to Sections 1471 through 1474 of the Code, any regulations or agreements thereunder, official interpretations thereof or any law implementing an intergovernmental approach thereto; or

(vii) any combination of paragraphs (i), (ii), (iii), (iv), (v) or (vi) above;

nor will additional amounts be paid with respect to any payment on a Note, Receipt or Coupon to a holder who is a fiduciary, a partnership, a limited liability company or a holder other than the sole beneficial owner of that payment to the extent that payment would be required by the laws of a Tax Jurisdiction to be included in the income, for tax purposes, of a beneficiary or settlor with respect to the fiduciary, a member of that partnership, an interest holder in a limited liability company or a beneficial owner who would not have been entitled to the additional amounts had that beneficiary, settlor, member, interest holder or beneficial owner been the holder.

As used herein:

(i) "**Tax Jurisdiction**" means Korea or any political subdivision or any authority thereof or therein having power to tax or, in addition, if the Issuer is acting through a Specified Branch, the Specified Country, or any political subdivision or any authority thereof or therein having power to tax; and

(ii) the "**Relevant Date**" means the date on which such payment first becomes due, except that, if the full amount of the moneys payable has not been duly received by the Principal Paying Agent or the Registrar, as the case may be, on or prior to such due date, it means the date on which, the full amount of such moneys having been so received, notice to that effect is duly given to the Noteholders in accordance with Condition 17.

The obligation to pay additional amounts shall not apply to (a) any estate, inheritance, gift, sales, transfer, personal property or any similar tax, assessment or other governmental charge or (b) any tax, assessment or other governmental charge which is payable otherwise than by deduction or withholding from payments of principal of, or interest or premium on, the Notes, Receipts or Coupons; *provided that*, except as otherwise set forth in these Terms and Conditions and in the Agency Agreement, the Issuer shall pay all stamp and other duties, if any, which may be imposed by Korea, the United Kingdom, the United States or any respective political subdivision or any taxing authority thereof or therein, with respect to the Agency Agreement or as a consequence of the initial issuance of the Notes.

Whenever there is mentioned in any context the payment of principal of, and any premium or interest on, any Note, Receipt or Coupon, such mention shall be deemed to include payment of additional amounts to the extent that, in such context, additional amounts are, were or would be payable in respect thereof.

11. Prescription

The Notes, Receipts and Coupons will become void unless presented for payment within a period of 10 years (in the case of principal) and five years (in the case of interest) after the Relevant Date (as defined in Condition 10) therefor.

There shall not be included in any Coupon sheet issued on exchange of a Talon any Coupon the claim for payment in respect of which would be void pursuant to this Condition or Condition 7(b) or any Talon which would be void pursuant to Condition 7(b).

12. Events of Default

(a) Events of Default applicable to Senior Notes only

The occurrence and continuance of one or more of the following events will constitute events of default (each an "**Event of Default**") under the Notes:

(i) *Non-payment*: default is made in the payment of any amount of principal or interest in respect of any of the Senior Notes on the due date for payment thereof and such default remains unremedied for, in the case of default in the payment of principal, seven days, or, in the case of default in the payment of interest, 14 days thereafter;

(ii) *Breach of other obligations*: default is made in the performance or observance of any other obligation of the Issuer under or in respect of the Senior Notes and such default remains unremedied for 30 days after written notice thereof, addressed to the Issuer by any holder of a Senior Note, has been delivered to the Issuer or to the specified office of the Principal Paying Agent;

(iii) *Cross-acceleration*: any Indebtedness (as defined below) in aggregate exceeding US$10,000,000 (or its equivalent in one or more other currencies) of the Bank either (1) becoming due and payable prior to the due date for payment thereof by reason of acceleration following a default by the Bank or (2) not being repaid by the Bank at, and remaining unpaid after, maturity (as extended by the period of grace, if any) applicable thereto, or any guarantee given by the Bank in respect of Indebtedness of any other person not being honored and remaining dishonored after becoming due and called; *provided that*, in the case of (1) above, if any such default under any such Indebtedness shall be cured or waived, then the default under the Notes shall be deemed to have been cured and waived;

(iv) *Bankruptcy, etc.*: a court or administrative or other governmental agency or body having jurisdiction shall enter a decree or order for relief in respect of the Issuer in an involuntary case under any applicable bankruptcy, insolvency, reorganization, compulsory composition or other similar law now or hereafter in effect, or appointing a receiver, liquidator, assignee, custodian, trustee, sequestrator or similar official of the Issuer or for any substantial part of its property or ordering the winding up, dissolution or liquidation of its affairs, or shall otherwise adjudicate or find the Issuer to be bankrupt or insolvent and such decree or order shall remain unstayed and in effect for a period of 45 consecutive days; or

(v) *Voluntary proceedings*: the Issuer shall commence a voluntary case under any applicable bankruptcy, insolvency, reorganization, compulsory composition or other similar law now or hereafter in effect, or consent to the entry of an order for relief in an involuntary case under any such law, or consent to the appointment or taking possession by a receiver, liquidator, assignee, custodian, trustee, sequestrator or similar official of the Issuer or for any substantial part of its property, or cease to carry on the whole or substantially the whole of its business or make any general assignment for the benefit of creditors, or enter into any composition with its creditors or take corporate action in furtherance of any such action.

In these Conditions:

(1) "**Person**" means any individual, company, corporation, firm, partnership, joint venture, association, organization, state, agency of a state or other entity, whether or not having a separate legal personality; and

(2) "**Indebtedness**" means all obligations created, incurred or assumed by a Person for the payment or repayment of moneys relating to or in connection with (a) any indebtedness of a Person in respect of moneys borrowed by it; (b) any indebtedness of a Person under acceptance or documentary credit facilities; (c) any indebtedness of a Person under bills, bonds, debentures, notes or similar instruments on which a Person is liable; (d) any obligations of a Person under leases which in accordance with accounting principles generally accepted in Korea are required to be capitalized for financial reporting purposes; (e) any indebtedness of a Person (whether actual or contingent) for moneys owing under any instrument entered into by a Person in respect of the acquisition cost of assets payment of which is deferred for a period in excess of six months after acquisition thereof, and (f) indebtedness of a Person (actual or contingent) under guarantees, security, indemnities or other commitments designed to assure any creditors in respect of the payment of any indebtedness of any other person.

In each and every such case of an Event of Default described in (i) through (v) above, unless the principal of all of the Notes shall already have become due and payable, the holders of not less than 25% in aggregate principal amount of the Notes then outstanding, by written notice as provided in the Agency Agreement, may declare the entire principal of all the Notes, and the interest accrued thereon, to be due and payable immediately, provided however, that if any of the events specified in (iv) and (v) shall have occurred, the aggregate principal amount of the Notes then outstanding shall automatically become due and payable without regard to the giving of any such notice. If, at any time after the principal of the Notes shall have been so declared due and payable, and before any judgment or decree for the payment of the moneys due shall have been obtained or entered, the Bank shall pay or deposit with the Principal Paying Agent a sum sufficient to pay all matured installments of interest upon all the Notes and the principal of any and all Notes that shall have become due otherwise than by acceleration (with interest upon such principal and, to the extent that the payment of such interest is enforceable under applicable law, on overdue installments of interest) and reasonable compensation and expenses of the Principal Paying Agent, and if any and all Events of Default under the Notes, other than the non-payment of the principal of Notes that shall have become due by acceleration, shall have been cured, waived or otherwise remedied, then and in every such case the holders of a majority in aggregate principal amount of the Notes then outstanding may, by written notice, waive all defaults and rescind and annul such declaration and its consequences.

(b) Events of Default applicable to Subordinated Notes only

(i) If any Bankruptcy Event or Liquidation Event shall occur and be continuing (and provided that a Trigger Event has not occurred and is continuing) then, in any such event, the holder of any Subordinated Note may by written notice to the Issuer declare such Note to be forthwith due and payable upon receipt of such notice by the Issuer whereupon such Note shall become due and repayable at its principal amount plus accrued interest (if any).

(ii) Except as expressly provided in this Condition 12(b), no holder of any Subordinated Note shall have any right to accelerate any payment of principal or interest in respect of the Subordinated Notes.

(iii) The only action the holder of a Subordinated Note may take in Korea against the Issuer on acceleration of the Subordinated Notes is to prove claims in the liquidation or other applicable proceedings in respect of the Issuer in Korea (subject to the satisfaction of the relevant requirements of applicable laws).

13. Consolidation, Merger and Sale of Assets

Nothing contained in these Conditions shall prevent the Issuer from, without the consent of the Noteholders, Receiptholders or Couponholders, consolidating with, or merging into, or selling, transferring, leasing or conveying its assets as an entirety or substantially as an entirety to any corporation organized under the laws of the respective jurisdiction of its incorporation; *provided* that (i) any successor corporation expressly assumes the applicable obligations of the Issuer under the Notes and the Agency Agreement, (ii) after giving effect to the transaction, with respect to the Issuer or any such successor corporation, no Event of Default and no event which, after notice or lapse of time or both, would become an Event of Default, shall have occurred and be continuing, and (iii) the Issuer has delivered to the Principal Paying Agent a certificate executed by a duly authorized officer of the Issuer and an opinion of counsel as to matters of law stating that such consolidation, merger, sale, transfer, lease or conveyance and, if a supplemental agency agreement is required in connection with such transaction, such supplemental agency agreement comply with the Agency Agreement and the Notes and that all conditions precedent herein provided for relating to such transaction have been complied with.

14. Replacement of Notes, Receipts, Coupons and Talons

Should any Note, Receipt, Coupon or Talon be lost, stolen, mutilated, defaced or destroyed, it may be replaced at the specified office of the Principal Paying Agent or the relevant Paying Agent (in the case of Bearer Notes, Receipts, Coupons and Talons) or of the Registrar (in the case of Registered Notes) upon payment by the claimant of such costs and expenses as may be incurred in connection therewith and on such terms as to evidence and indemnity as the Issuer and the Principal Paying Agent or the Registrar, as the case may be, may reasonably require. Mutilated or defaced Notes, Receipts, Coupons or Talons must be surrendered before replacements will be issued.

15. Agents

The names of the initial Agents and their initial specified offices are set out below.

The Issuer is entitled to vary or terminate the appointment of any Agent and/or appoint additional or other Agents and/or approve any change in the specified office through which any of the same acts, *provided that*:

(i) there will at all times be a Principal Paying Agent and a Registrar;

(ii) so long as the Notes are listed on any stock exchange or admitted to trading by any other relevant authority, there will at all times be a Paying Agent (in the case of Bearer Notes) and a Registrar and Transfer Agent (in the case of Registered Notes) with a specified office in such place as may be required by the rules and regulations of the relevant stock exchange or any other relevant authority (and in the case of Bearer Notes, outside the United States);

(iii) so long as any of the Registered Global Notes payable in a Specified Currency other than U.S. dollars are held through DTC or its nominee, there will at all times be an Exchange Agent with a specified office in New York, London or Hong Kong;

(iv) there will at all times be a Paying Agent and a Transfer Agent with a specified office in a city in continental Europe;

(v) there will at all times be a Registrar and a Transfer Agent each having a specified office in New York City;

(vi) so long as the Notes are listed on the SGX-ST and the rules of the SGX-ST so require, if the Notes are issued in definitive form, there will at all times be a Paying Agent in Singapore unless the Issuer obtains an exemption from the SGX-ST.

In addition, the Issuer shall forthwith appoint a Paying Agent having a specified office in New York City in the circumstances described in the second paragraph of Condition 7(b). Any variation, termination, appointment or change shall only take effect (other than in the case of insolvency or of a Paying Agent failing to become or ceasing to become exempt from withholding pursuant to FATCA, when it shall be of immediate effect) after not less than 30 nor more than 45 days' prior notice thereof shall have been given to the Noteholders in accordance with Condition 17.

In acting under the Agency Agreement, the Agents act solely as agents of the Issuer and do not assume any obligation to, or relationship of agency or trust for or with any Noteholders, Receiptholders or Couponholders. The Agency Agreement contains provisions permitting any entity into which any Agent is merged or converted or with which it is consolidated or to which it transfers all or substantially all of its assets to become the successor agent and for relief from responsibility in certain circumstances, and entitles any of them to enter into business transactions with the Issuer without being liable to account to the Noteholders, Receiptholders or Couponholders for any resulting profit.

16. Exchange of Talons

On and after the Fixed Interest Date or the Interest Payment Date, as appropriate, on which the final Coupon comprised in any Coupon sheet matures, the Talon (if any) forming part of such Coupon sheet may be surrendered at the specified office of the Principal Paying Agent or any other Paying Agent in exchange for a further Coupon sheet including (if such further Coupon sheet does not include Coupons to (and including) the final date for the payment of interest due in respect of the Bearer Note to which it appertains) a further Talon, subject to the provisions of Condition 14. Each Talon shall, for the purposes of these Terms and Conditions, be deemed to mature on the Fixed Interest Date or the Interest Payment Date (as the case may be) on which the final Coupon comprised in the relative Coupon sheet matures.

17. Notices

All notices regarding the Registered Notes will be deemed to be validly given if sent by first class mail or (if posted to an overseas address) by air mail to holders at their respective addresses as recorded in the Register and will be deemed to have been validly given on the fourth day after the date of such mailing.

All notices regarding the Bearer Notes shall be published in a leading English language daily newspaper of general circulation in London. It is expected that such publication will be made in the Financial Times.

The Issuer shall also ensure that notices are duly published in a manner which complies with the rules and regulations of any other stock exchange on which the Notes are for the time being listed. Any such notice will be deemed to have been given on the date of the first publication or, where required to be published in more than one newspaper, on the date of the first publication in all required newspapers.

Until such time as any definitive Notes are issued, there may (*provided that*, in the case of Notes listed on a stock exchange, the stock exchange agrees), so long as the Global Note(s) for this Series is or are held in its/their entirety on behalf of (i) Euroclear, Clearstream and/or DTC, be substituted, in relation only to this Series, for such publication as aforesaid, the delivery of the relevant notice to Euroclear, Clearstream and/or DTC for communication by them to the holders of the Notes of this Series and (ii) the CMU Service, be substituted for such publication in such newspaper(s) the delivery of the relevant notice to the persons shown in a CMU Instrument Position Report issued by the CMU Service o the second business day preceding the date of dispatch of such notice as holding interests in the relevant Global Note and, in addition, for so long as any Notes are listed on a stock exchange and the rules of that stock exchange (or any other relevant authority) so require, such notice will be published in a manner specified by those rules. Any such notice shall be deemed to have been given to the holders of the Notes one day after the day on which the said notice was given to Euroclear, Clearstream, DTC or the persons shown in the relevant CMU Instrument Position Report.

Notices or demanded to be given or made by any holder of the Notes shall be in writing and given by lodging the same, together (in the case of any Note in definitive form) with the relative Note or Notes, with the Principal Paying Agent (in the case of Bearer Notes) or the Registrar (in the case of Registered Notes).

While any of the Notes are represented by a Global Note, such notice or demand may be given or made by any holder of a Note to the Principal Paying Agent or, the Registrar through Euroclear, Clearstream and/or DTC or, in the case of Notes lodged with the CMU Service, by delivery by such holder of such notice to the CMU Lodging Agent in Hong Kong, as the case may be, in such manner as the Principal Paying Agent and Registrar and Euroclear, Clearstream, the CMU Service and/or DTC, as the case may be, may approve for this purpose.

18. Meetings of Noteholders, Modification and Waiver

(a) Meetings requiring majority consent

The Agency Agreement contains provisions for convening meetings of the Noteholders to consider any matter affecting their interests, including the sanctioning by (i) Extraordinary Resolution or (ii), if in the case of any Notes Condition 18(b) is specified in the applicable Pricing Supplement as being applicable, the affirmative vote of each Noteholder of such Series then outstanding, of a modification of the Notes, the Receipts, the Coupons or any of the provisions of the Agency Agreement. Such a meeting may be convened by the Issuer or Noteholders holding not less than 10% in nominal amount of the Notes for the time being remaining outstanding. The quorum at any such meeting for passing an Extraordinary Resolution is one or more persons holding or representing not less than 50% in nominal amount of the Notes for the time being outstanding, or at any adjourned meeting one or more persons being or representing Noteholders whatever the nominal amount of the Notes so held or represented, except that at any meeting the business of which includes the modification of certain provisions of the Notes, Receipts or Coupons to which Condition 18(b) is not specified as applicable (including modifying the date of maturity of the Notes or any date for payment of interest thereof, reducing or canceling the amount of principal or the rate of interest payable in respect of the Notes or altering the currency of payment of the Notes, Receipts or Coupons), the quorum shall be one or more persons holding or representing not less than two-thirds in nominal amount of the Notes for the time being outstanding, or at any adjourned such meeting one or more persons holding or representing not less than one third, in nominal amount of the Notes for the time being outstanding. An Extraordinary Resolution passed at any meeting of the Noteholders shall be binding on all the Noteholders, whether or not they are present at the meeting, and on all Receiptholders and Couponholders.

(b) Meetings requiring unanimous consent

If this Condition 18(b) is specified in the applicable Pricing Supplement as being applicable to the Notes of any Series then, notwithstanding anything herein to the contrary, no action at any meeting of Noteholders of such Series, and no modification, amendment, or supplement to the Notes, these Terms and Conditions or relevant provisions of the Agency Agreement, may:

(i) change the due date for the payment of the principal (including premium or redemption amounts, if any, and, in the case of Zero Coupon Notes, the Amortized Face Amount or other amount payable in respect thereof) or interest, if any, in respect of any Note of such Series;

(ii) reduce the principal amount (including premium or redemption amounts, if any, and, in the case of Zero Coupon Notes, the Amortized Face Amount or other amount payable in respect thereof) in respect of any Note of such Series, the portion of such principal amount which is payable upon acceleration of the maturity of such Notes, the interest rate thereon or the premium payable upon redemption thereof;

(iii) change the obligation of the Issuer to pay additional amounts on any Note of such Series pursuant to Condition 10;

(iv) change the Specified Currency in which or the required places at which payment with respect to principal (including premium or redemption amounts, if any, and, in the case of Zero Coupon Notes, the Amortized Face Amount or other amount payable in respect thereof) or interest, if any, in respect of Notes of such Series is payable;

(v) impair the right to institute suit for the enforcement of any such payment on or with respect to any Note of such Series;

(vi) amend the procedures provided for or the circumstances under which the Notes of such Series may be redeemed;

(vii) reduce the proportion of the principal amount of Notes of such Series the consent of the Noteholders of which is necessary to modify or amend the Agency Agreement or these Terms and Conditions or to make, take or give consent, waiver or other action provided hereby or thereby to be made, taken or given; or

(viii) reduce the percentage of aggregate principal amount of Notes outstanding required for the adoption of a resolution or the quorum required at any meeting of Noteholders at which a resolution is adopted, in each case, unless such action or modification, amendment or supplement is approved by the affirmative vote of all Noteholders of such Series then outstanding.

(c) Modifications

The Agents and the Issuer may agree, subject to Condition 18(b) (if applicable) and without the consent of the Noteholders, Receiptholders or Couponholders, to:

(i) any modification (except as mentioned above) of any provisions of the Notes, the Receipts, the Coupons, the Conditions or the Agency Agreement which is not prejudicial to the interests of the Noteholders; or

(ii) any modification of the Notes, the Receipts, the Coupons, the Conditions or the Agency Agreement which is of a formal, minor or technical nature or is made to correct a manifest error or to comply with mandatory provisions of the law of the jurisdiction in which the Issuer is incorporated.

Any determination as to whether any modification is prejudicial to the interests of the holders of the Notes, the Receipts and the Coupons pursuant to the Conditions and the Agency Agreement shall be made solely by the Issuer and none of the Agents shall have any responsibility or liability whatsoever with respect to such determination. Any such modification shall be binding on the Noteholders, the Receiptholders and the Couponholders and any such modification shall be notified to the Noteholders in accordance with Condition 17 as soon as practicable thereafter.

19. Further Issues

The Issuer shall be at liberty from time to time without the consent of the Noteholders, Receiptholders or Couponholders to create and issue further notes having terms and conditions the same as the Notes or the same in all respects save for the amount and date of the first payment of interest thereon and so that the same shall be consolidated and form a single Series with the outstanding Notes; *provided that*, in the case of Bearer Notes initially represented by interests in a Temporary Bearer Global Note exchangeable for interests in a Permanent Bearer Global Note or definitive Bearer Notes, such consolidation will occur only upon certification of non-U.S. beneficial ownership and exchange of interests in the Temporary Bearer Global Note for interests in the Permanent Bearer Global Note or definitive Bearer Notes; provided further that, further notes must (A) be issued with no more than a de minimis amount of original issue discount, or (B) be part of a "qualified reopening" for United States federal income tax purposes.

20. Provision of Information

The Issuer has covenanted in the Program Agreement that for so long as any Notes remain outstanding and are "restricted securities" (as defined in Rule 144(a)(3) under the Securities Act), the Issuer shall, during any period in which it is neither subject to Section 13 or 15(d) of the Exchange Act nor exempt from reporting pursuant to Rule 12g3-2(b) under the Exchange Act, make available to any Noteholder, Receiptholder or Couponholder of, or beneficial owner of an interest in, such Notes, Receipts or Coupons in connection with any resale thereof and to any prospective purchaser designated by such Noteholder, Receiptholder or Couponholder or beneficial owner, in each case upon request, the information specified in, and meeting the requirements of, Rule 144A(d)(4) under the Securities Act.

21. Governing Law and Submission to Jurisdiction

The Agency Agreement, the Notes, the Receipts and the Coupons are governed by, and shall be construed in accordance with, the laws of the State of New York, except that that in the case of Subordinated Notes, Condition 3(b) is governed by and shall be construed in accordance with Korean law. The Issuer will agree that any legal action, suit, or proceeding arising out of or based upon the Agency Agreement, the Notes, the Receipts or the Coupons may be instituted in any New York State or U.S. Federal court located in the Borough of Manhattan, The City of New York. The Issuer will appoint Shinhan Bank, New York Branch as its authorized agent upon whom process may be served in connection with any such action and will irrevocably consent to the jurisdiction of any such court in respect of any such proceeding. The Issuer will also waive, to the extent permissible under applicable law, any objection which the Issuer may now or hereafter have to the laying of venue of any such proceeding and any claim that such proceeding brought in such court has been brought in an inconvenient forum.

USE OF PROCEEDS

The net proceeds from each issue of the Notes will be applied by the Bank for its general corporate purposes or such other purposes as may be specified in the applicable Pricing Supplement.

EXCHANGE RATES

The following table sets forth, the Market Average Exchange Rate for the last day of, and the average for, the periods indicated. No representation is made that the Won or U.S. dollar amounts referred to herein could have been or could be converted into U.S. dollars or Won, as the case may be, at any particular rate or at all.

Year Ended December 31,	At End of Period	Average[(1)]	High	Low
		(Won per US$1.00)		
2015	1,172.0	1,131.5	1,203.1	1,068.1
2016	1,208.5	1,160.5	1,240.9	1,093.2
2017	1,071.4	1,130.8	1,208.5	1,071.4
2018	1,118.1	1,100.3	1,142.5	1,057.6
2019	1,157.8	1,165.7	1,218.9	1,111.6
October	1,168.4	1,184.1	1,203.7	1,166.5
November	1,179.3	1,167.5	1,179.3	1,156.1
December	1,157.8	1,175.8	1,193.7	1,157.8
2020 (through March 31)	1,222.6	1,193.6	1,280.1	1,153.1
January	1,183.5	1,164.3	1,183.5	1,153.1
February	1,215.9	1,193.8	1,217.7	1,179.8
March (through March 31)	1,222.6	1,220.1	1,280.1	1,185.0

Source: Seoul Money Brokerage Services, Ltd.

Note:

(1) Represents the average of the Market Average Exchange Rate over the relevant period.

RISK FACTORS

In addition to other information contained in this offering circular, you should consider carefully the risks described below. These risks are not the only ones that the Bank faces. Additional risks not currently known to the Bank or those which the Bank currently believes are immaterial may also impair its business operations. The Bank's business, financial condition or results of operations could be materially adversely affected by any of these risks.

Risks Relating to the Bank's Business

Difficult conditions and turbulence in the Korean and global economy and financial markets may adversely affect the Bank's business, asset quality, capital adequacy and earnings.

Most of the Bank's assets are located in, and the Bank generates most of its income from, Korea. Accordingly, the Bank's business and profitability are largely dependent on the general economic and social conditions in Korea, including interest rates, inflation, exports, personal expenditures and consumption, unemployment, demand for business products and services, debt service burden of households and businesses, the general availability of credit, the asset value of real estate and securities and other factors affecting the financial well-being of the Bank's corporate and retail customers.

The Korean economy is closely integrated with, and is significantly affected by, developments in the global economy. In light of the ongoing general uncertainty about economic and political conditions in Europe (particularly amidst Brexit), signs of cooling economy for China, the continuing geopolitical and social instability in various parts of the Middle East, including Iraq, Syria and Yemen, as well as in the former republics of the Soviet Union, including Russia and Ukraine, potential escalation of ongoing trade wars between major economies including the U.S. and China and the recent coronavirus (COVID-19) outbreak, among others, significant uncertainty remains as to the global economic prospects in general and has adversely affected, and may continue to adversely affect, the Korean economy. In addition, as the Korean economy matures, it is increasingly exposed to the risk of a "scissor effect," namely being pursued by competitors in less advanced economies while not having fully caught up with competitors in advanced economies, which risk is amplified by the fact that Korean economy is heavily dependent on exports. The Korean economy also continues to face other difficulties, including sluggishness in domestic consumption and investment, volatility in the real estate market, rising household debt, potential declines in productivity due to aging demographics and low birth rates, and a rise in youth unemployment. Any future deterioration of the global and Korean economies could adversely affect the Bank's business, financial condition and results of operations.

In particular, difficulties in financial and economic conditions could result in significant deterioration in the quality of the Bank's assets and accumulation of higher provisioning, allowances for loan losses and charge-offs as an increasing number of the Bank's corporate and retail customers declare bankruptcy or insolvency or otherwise face increasing difficulties in meeting their debt obligations. For example, in 2011 and 2012, the continuing slump in the real estate market and the shipbuilding industry led to increased delinquency among many of the Bank's corporate borrowers, including some Korean commercial conglomerates knowns as "*chaebol*s," in such industries, and in certain cases, even insolvency, workouts, recovery proceedings and/or voluntary arrangements with creditors. During the same period, the sustained slump in the real estate market also led to increased delinquency among the Bank's retail borrowers, and in particular, borrowers with collective loans for pre-sale of newly constructed apartment units. Accordingly, the Bank's delinquency ratio (based on delinquency of one or more months past due and after charge-offs and loan sales) increased from 0.48% as of December 31, 2010 to 0.60% as of December 31, 2011 and 0.61% as of December 31, 2012. However, primarily due to a modest rebound in the housing market and the Bank's active efforts to reduce its exposure to such troubled industries and other at-risk borrowers through preemptive risk management policies and increased lending to borrowers with high-quality credit profiles as part of the Bank's strategic initiative to improve its asset quality, the Bank's delinquency ratio has steadily decreased or remained stable since then, to 0.39% as of December 31, 2013, 0.31% as of December 31, 2014, 0.33% as of December 31, 2015, 0.28% as of December 31, 2016, 0.23% as of December 31, 2017, 0.25% as of December 31, 2018 and 0.26% as of December 31, 2019. The Bank's delinquency ratio has remained stable during the past few years mainly as the Bank has decreased lending to small- and medium-sized enterprises amid continuing sluggishness in certain industries such as IT, manufacturing and construction. There is no assurance, however, that the Bank will not experience further loan losses from borrowers, particularly those in troubled industries, since the quality of loans to such borrowers may further deteriorate due to a continued slump in these industries or for other reasons. In addition, the recent coronavirus (COVID-19) outbreak is expected to have a direct impact on global and domestic consumption, most notably in the transportation, tourism, retail, lodging, catering, industrial production and construction industries, and particularly small- and medium-sized enterprises and retail customers may face significant difficulties in making timely interest and principal payments, which may lead to an increase in delinquency and adversely affect the Bank's asset quality.

Moreover, as was the case during the global financial crisis of 2008-2009, depending on the nature of the difficulties in the financial markets and general economy, the Bank may be forced to scale back certain of its core lending activities and other operations and/or borrow money at a higher funding cost or face a tightening in the net interest spread, any of which may have a negative impact on its earnings and profitability. Furthermore, while the Bank currently maintains its capital adequacy ratio at a level higher than the required regulatory minimum, there is no guarantee that an even higher capital requirement will not be imposed by the Government in case of a renewed economic crisis. In addition, given the highly integrated nature of financial systems and economic relationships worldwide, there may be other unanticipated systemic or other risks that may not be presently predictable. Any of these risks, if materialized, may have a material adverse effect on the Bank's business, liquidity, financial condition and results of operations.

Competition in the Korean financial services industry is intense, and may further intensify.

Competition in the Korean financial services industry is, and is likely to remain, intense, including as a result of the sustained low interest rate environment (which narrows opportunities to make profit based on the spread between lending rates and funding rates), the continuing sluggishness in the general economy, the growing maturation and saturation of the industry as a whole, the entry of new market participants and deregulation, among others.

The Bank competes principally with other national commercial banks in Korea, but also faces competition from a number of additional banking institutions, including branches and subsidiaries of foreign banks operating in Korea, regional banks, Internet-only banks, government-owned development banks and Korea's specialized banks, such as Korea Development Bank, the Industrial Bank of Korea and the National Federation of Fisheries Cooperatives, as well as various other types of financial service providers, including savings institutions (such as mutual savings and finance companies, credit unions and credit cooperatives), investment companies (such as securities brokerage firms, merchant banking corporations and asset management companies) and life insurance companies. As of December 31, 2019, Korea had six major nationwide domestic commercial banks (including Citibank Korea Inc. and Standard Chartered Bank Korea Limited, both of which are domestic commercial banks acquired by global financial institutions), six regional commercial banks, two Internet-only banks and branches and subsidiaries of 36 foreign banks. Foreign financial institutions, many of which have greater experiences and resources than the Bank does, may continue to enter the Korean market and compete with the Bank in providing financial products and services either by themselves or in partnership with existing Korean financial institutions.

In the small- and medium-sized enterprise and retail banking segments, which have been the Bank's traditional core businesses, competition is expected to increase further. In recent years, Korean banks, including the Bank, have increasingly focused on stable asset growth based on quality credit, such as corporate borrowers with high credit ratings, loans to "small office, home office" ("**SOHO**") with high levels of collateralization, and mortgage and home equity loans within the limits of the prescribed loan-to-value ratios and debt-to-income ratios. This common shift in focus toward stable growth based on less risky assets has intensified competition as banks compete for the same limited pool of quality credit by engaging in price competition or by other means although the Bank has traditionally focused, and will continue to focus, on enhancing profitability rather than increasing asset size or market share, and has avoided, to the extent practicable, engaging in price competition by way of lowering lending rates. In addition, such competition may result in lower net interest margin and reduced overall profitability, especially if the low interest rate environment were to continue for a significant period of time. The Bank's net interest margin declined slightly to 1.72% in 2019 from 1.81% in 2018 due to, at least partly, decreases in base interest rate by the Bank of Korea from 1.75% to 1.50% in July 2019 and from 1.50% to 1.25% in October 2019 and may decline further as the Bank of Korea has reduced the base interest rate from 1.25% to 0.75% in March 2020 and if the base interest rate is decreased again during 2020. Even if interest rates were to increase, the effect on the Bank's results of operations may not be as beneficial as expected, or at all, due to factors such as increased volatility of market interest rates and tighter regulations regarding SOHO loans, including the implementation of additional credit review guidelines for individual businesses. Further, if competing financial institutions seek to expand market share by lowering their lending rates, the Bank may suffer customer loss, especially among customers who select their lenders principally on the basis of lending rates. In response thereto or for other strategic reasons, the Bank may subsequently lower its lending rates to stay competitive, which could lead to a further decrease in its net interest margins and outweigh any potential positive impact on the net interest margin from a general rise in market interest rates. Any future decline in the Bank's customer base or its net interest margins could have an adverse effect on its results of operations and financial condition.

Consolidation among the Bank's rival institutions and the Government's privatization efforts may also add competition in the markets in which the Bank conducts business. A number of significant mergers and acquisitions in the industry have taken place in Korea recently, including Hana Financial Group's acquisition of Korea Exchange Bank in 2012 and the resulting merger of Hana Bank and Korea Exchange Bank in September 2015. Moreover, in 2014, pursuant to the implementation of the Government's privatization plan with respect to Woori Finance Holdings (now merged into Woori Bank) and its former subsidiaries, Woori Financial, Woori Asset Management and Woori F&I were acquired by KB Financial Group, Kiwoom Securities and Daishin Securities, respectively, and Woori Investment & Securities, Woori Aviva Life Insurance and Woori FG Savings Bank were acquired by NongHyup Financial Group. In addition, in October 2014, the Government's ownership interest in the holding companies of Kwangju Bank and Kyongnam Bank were acquired by JB Financial Group and BS Financial Group (now BNK Financial Group), respectively. In 2015, the Government decided to sell a 30% to 40% interest in Woori Bank to multiple investors in separate blocks ranging from 4% to 10% each. Since December 2016, Korea Deposit Insurance Corporation has consummated sales transactions with seven institutional investors including Kiwoom Securities, Korea Investment and Securities, Hanwha Life Insurance, Tongyang Life Insurance, Eugene Asset Management, Mirae Asset Global Investments and IMM Private Equity for the sale of an aggregate 29.7% interest in Woori Bank in separate blocks. Any of these developments may place the Bank at a competitive disadvantage and outweigh any potential benefit to the Bank in the form of opportunities to acquire new customers who are displeased with the level of services at the newly reorganized entities or to provide credit facilities to corporate customers who wish to maintain relationships with a wide range of banks in order to diversify their sources of funding. The Bank expects that such consolidation and other structural changes in the financial industry will continue. Other financial institutions may seek to acquire or merge with other entities, and the financial institutions resulting from such consolidation may, by virtue of their increased size and business scope, provide greater competition for the Bank. Increased competition and continuing consolidation may lead to decreased margins, resulting in a material adverse impact on the Bank's future profitability.

Regulatory reforms and the general modernization of business practices in Korea have also led to increased competition among financial institutions in Korea. Since July 2015, the FSC has provided, through the Korea Financial Telecommunications and Clearings Institute, the integrated automatic payment transfer management service, which allows account holders to search for, terminate or modify automatic payments they have set up with financial institutions participating in such service (currently including banks, securities companies and other financial institutions such as The Post Office, Korean Federation of Community Credit Cooperatives, National Credit Union Federation of Korea, Mutual Savings Bank and National Forestry Cooperative Federation). In addition, the FSC began providing the integrated account management service from December 2016, which allows account holders to search for detailed information of their bank accounts opened in banks participating in such service, close small-sum inactive accounts (i.e., accounts with no transaction activity during the previous one year period and with a balance of less than ₩500,000) and transfer the balance in such accounts to other accounts. Moreover, in December 2017, the FSC introduced the "my account at a glance" system, which enables consumers to view their key financial account information online, including information on banks, insurances, mutual finance, loan and card issuances on one page. The "my account at a glance" system became available on mobile channels in February 2016 and expanded its scope of services to include savings banks and securities companies. Since their introduction, the integrated automatic payment transfer management service, integrated account management service and "my account at a glance" system have gained widespread acceptance. As the reform of the financial sector continues, competition may become more intense among existing banks, insurance companies, securities companies and other financial organizations, and may lead to significant changes in the current Korean financial market. Moreover, the Regulation on the Supervision of the Banking Business was amended on July 12, 2018 to provide that, beginning on January 1, 2020, in calculating loan to deposit ratio, retail loans and corporate loans are weighed differently, with retail loans subject to a multiple of 115% and corporate loans (excluding loans to SOHOs) subject to a multiple of 85%, thereby increasing the impact of retail loans and reducing the impact of corporate loans in calculating such ratio. This may further intensify competition for corporate loans and deposits among commercial banks and, as a result, the Bank may face difficulties in increasing or retaining its corporate loans and deposits, which in turn may result in an increase in its cost of funding.

Furthermore, as the Korean economy further develops and new business opportunities arise, more competitors may enter the financial services industry. For example, as online service providers and technology companies with large-scale user networks, such as Kakao Corp., NAVER and Samsung Electronics, recently make significant inroads in providing virtual payment services through a system based on a growing convergence of financial services and technology commonly referred to as "fintech," competition for online customers is growing not just among commercial banks, but also from online and mobile payment service providers. In 2015, the Government announced its plans to allow Internet-only banks to operate in Korea. KT consortium's K-Bank and Kakao consortium's Kakao Bank commenced operations in April 2017 and July 2017, respectively, and Viva Republica consortium's Toss Bank has recently obtained preliminary business authorization from the FSC on December 16, 2019. Internet-only banks may have advantages over traditional banks as the former can pass savings in labor and overhead costs to their customers by offering higher interest rates on deposit accounts, lower loan costs and reduced service fees. Accordingly, commercial banks will likely face increasing pressure to upgrade their service platforms to attract and maintain online users, which represents a growing customer base compared to traditional customers who have primarily conducted banking in-person at physical banking branches.

As part of the Government's financial policies to promote innovative digital finance, 10 commercial banks, including Shinhan Bank, began offering a preliminary open banking service in October 2019. More local banks and fintech companies joined in December 2019, when the open banking service was fully and officially launched. Open banking service allows each fintech company and bank to provide banking services, such as checking balances and making withdrawals and transfers, with regards to customers' accounts at other banks. Using open banking service, customers can easily access accounts, products and services across multiple banks, instead of being limited to the accounts, products and services available at the particular bank that they deal with. In addition, on January 9, 2020, the Korean National Assembly passed amendments to three major data privacy laws (the Personal Information Protection Act, the Act on the Promotion of Information and Communications Network Utilization and Information Protection and the Act on the Use and Protection of Credit Information). These amendments introduced the MyData service, allowing and requiring (upon the customer's request and subject to compliance requirements) financial institutions that have been approved by the FSC as a MyData service provider access and sharing of customers' personal information, credit information and transaction data. If and when fintech companies receive authorization as MyData service providers, we expect competition for customers among banks and fintech firms such as Kakao Pay, Toss and Bank Salad to intensify.

Recently, following the global financial crisis, the Government has subjected Korean financial institutions to stricter regulatory requirements and guidelines in areas of asset quality, capital adequacy, liquidity and residential and other lending practices (including a requirement to maintain a certain ratio of core capital to total risk exposure, which was introduced in January 2018 in order to control excessive leverage), which has had a dampening effect on competition. The FSC implemented the capital requirements of Basel III, whose minimum requirements were phased in sequentially from December 1, 2013 through full implementation by January 1, 2015, based on the guidelines set forth in the amended Regulation on the Supervision of the Banking Business and the Detailed Regulation on the Supervision of the Banking Business. In addition, the FSC has implemented the Basel III requirements relating to liquidity coverage ratio and capital conservation buffer, each of which have been fully phased in as of January 1, 2019. As of January 1, 2016, the FSC implemented Basel III requirements relating to accumulation of additional capital for systemically important banks and countercyclical capital buffer requirements. Each year, the FSC may designate banks with significant influence (based on size and connectivity with other financial institutions) on the domestic financial system as a domestic systemically important bank and require the accumulation of additional capital in accordance with the highest of: (i) ratio of common equity capital to risk-weighted assets, ranging from 0.0% to 2.0%, depending on the systematic importance evaluation score, (ii) if the bank's holding company is a domestic systemically important bank holding company, the capital ratio corresponding to the additional capital required for the bank holding company under the Financial Holding Company Supervision Regulations, or (iii) if the bank is also a global systemically important bank, as defined by the Basel Committee on Banking Supervision (the "**Basel Committee**"), the capital ratio as required by the Basel Committee. According to the instructions of the FSC, domestic systematically important banks including the Bank have been required to maintain an additional capital buffer of 0.25% since January 1, 2016, with such buffer increased by 0.25% annually to reach 1.00% as of January 1, 2019. The FSC may also, upon quarterly review, determine and require banks to accumulate a required level of countercyclical capital buffer within the range of 0% to 2.5% of risk-weighted assets, taking into account factors such as the degree of increase in credit relative to the gross domestic product. However, there is no assurance that these measures will have the effect of curbing competition or that the Government will not reverse or reduce such measures or introduce other deregulatory measures, which may further intensify competition in the Korean financial services industry. For further details on the capital requirements applicable to the Bank, see "Supervision and Regulation — Principal Regulations Applicable to Banks — Capital Adequacy."

If, despite its efforts to adapt to the changing macroeconomic environment and comply with new regulations, the Bank is unable to compete effectively in the changing business and regulatory environment, its profit margin and market share may erode and its future growth opportunities may become limited, which could adversely affect its business, financial condition and results of operations.

The Bank has significant exposure to small- and medium-sized enterprises, and financial difficulties experienced by such enterprises may result in a deterioration of its asset quality.

One of the Bank's core banking businesses has historically been and continues to be lending to small- and medium-sized enterprises (as defined in "*Business — Business Overview — The Bank's Principal Activities — Corporate Banking Services — Small- and Medium-sized Enterprises Banking*"). The Bank's loans (before allowance for loan losses and deferred loan origination costs and fees) to such enterprises amounted to ₩78,556 billion as of December 31, 2017, ₩84,972 billion as of December 31, 2018 and ₩91,162 billion as of December 31, 2019, representing 33.7%, 33.6% and 33.8%, respectively, of the Bank's total loan portfolio as of such dates.

Compared to loans to large corporations, which tend to be better capitalized and better able to weather business downturns, or loans to individuals and households, which tend to be secured with homes and with respect to which the borrowers are therefore less willing to default, loans to small- and medium-sized enterprises have historically had a relatively higher delinquency ratio. Many small- and medium-sized enterprises represent sole proprietorships or small businesses dependent on a relatively limited number of suppliers or customers and tend to be affected to a greater extent than large corporate borrowers by fluctuations in the Korean and global economy. In addition, small- and medium-sized enterprises often maintain less sophisticated financial records than large corporate borrowers. Therefore, it is generally more difficult for banks to judge the level of risk inherent in lending to these enterprises, as compared to large corporations. In addition, many small- and medium-sized enterprises are dependent on business relationships with large corporations in Korea, primarily as suppliers. Any difficulties encountered by those large corporations would likely hurt the liquidity and financial condition of related small- and medium-sized enterprises, including those to which the Bank has exposure, also resulting in an impairment of their ability to repay loans. As large Korean corporations continue to expand into China, Southeast Asia and other countries with lower labor costs and other expenses by relocating their production plants and facilities to such countries, such development may have a material adverse impact on such small- and medium-sized enterprises.

Financial difficulties experienced by small- and medium-sized enterprises as a result of, among other things, recent economic difficulties in Korea and globally and aggressive marketing and intense competition among banks to lend to this segment in recent years, coupled with the Bank's efforts to counter asset quality deterioration through conservative lending policy, have led to a fluctuation in the asset quality of the Bank's loans to this segment. As of December 31, 2017, 2018 and 2019, the Bank's delinquent loans to small- and medium-sized enterprises were ₩303 billion, ₩299 billion and ₩346 billion, respectively, representing delinquency ratios (net of charge-offs and loan sales) of 0.39%, 0.35% and 0.38%, respectively. If the ongoing difficulties in the Korean or global economy were to continue or aggravate, the delinquency ratio of the Bank's loans to small- and medium-sized enterprises may rise.

Of particular concern is the Bank's exposure to enterprises in the real estate and leasing and construction industries. As of December 31, 2019, the Bank had outstanding loans (before allowance for loan losses and deferred loan origination costs and fees) to enterprises in the real estate and leasing and construction industries (many of which are small- and medium-sized enterprises) of ₩28,868 billion and ₩3,172 billion, respectively, representing 10.7% and 1.2%, respectively, of the Bank's total loan portfolio as of such date. The Bank also has other exposure to borrowers in these sectors of the Korean economy, including extending guarantees for the benefit of such companies and holding debt and equity securities issued by such companies. In addition, the Bank has exposure to borrowers in the shipbuilding and shipping industries, which have yet to stage a meaningful turnaround.

The enterprises in the real estate development and construction industries in Korea, which are heavily concentrated in the housing market, have recently seen modest growth backed by the housing market which has remained strong over the recent few years. However, the Government's policy measures to stabilize the real estate market, oversupply of residential property, ongoing economic sluggishness in Korea and globally and demographic changes in the Korean population may result in difficulties to the housing market in general as well as these enterprises. The Bank also has limited exposure to real estate project financing, particularly by construction companies that have built residential units in provinces outside the metropolitan Seoul area, which have experienced a relatively low rate of pre-sales, the proceeds from which the construction companies primarily rely on as a key source for liquidity and cash flow.

Any of the foregoing developments may result in deterioration in the asset quality of the Bank. See "*Description of Assets and Liabilities — Credit Exposures to Companies in Workout and Recovery Proceedings*." The Bank has been taking active steps to curtail delinquency among its small- and medium-sized enterprise customers, including by way of strengthening loan application review processes and closely monitoring borrowers in troubled sectors. Despite such efforts, there is no assurance that the delinquency ratio for the Bank's loans to small- and medium-sized enterprises will not rise in the future, especially if the Korean economy were to face renewed difficulties and, as a result, the liquidity and cash flow of these borrowers deteriorate. A significant rise in the delinquency ratios among these borrowers would lead to increased charge-offs and higher provisioning and reduced interest and fee income, which would have a material adverse effect on the Bank's business, financial condition and results of operations.

A limited portion of the Bank's credit exposure is concentrated in a relatively small number of large corporate borrowers, and future financial difficulties experienced by them may have an adverse impact on the Bank.

Of the Bank's 10 largest corporate exposures as of December 31, 2019, two were companies for which the Bank was a main creditor bank. All of the 10 companies are or were members of the main debtor groups as identified by the Governor of the FSS, which are largely comprised of the largest Korean commercial conglomerates knowns as "*chaebol*s." As of such date, the total amount of the Bank's exposures to the 10 companies was ₩18,325 billion, or 9.8%, of its total exposures. As of that date, the Bank's single largest outstanding exposure to a main debtor group amounted to ₩3,797 billion, or 2.0%, of its total exposures. See "*Description of Assets and Liabilities — Loan Portfolio — Exposure to Main Debtor Groups*." Largely due to the continued stagnation in the shipbuilding industry, current and former member companies of the STX Group, one of the leading conglomerates in Korea, entered into voluntary arrangements in 2013 with their creditors (including the Bank) to improve their credit situation, and STX Offshore & Shipbuilding and STX Heavy Industries, two of the STX Group's member companies, recently filed for court receivership in May 2016 and July 2016, respectively. Due to stagnation in the construction industry, Keangnam Enterprises Co., Ltd., a large construction company in Korea, also entered into workout proceedings in 2013 and subsequently filed for recovery proceedings in March 2015. Dongbu Steel Co., Ltd. and Sambu Construction Co., Ltd. also experienced significant hardship and entered into workout or recovery proceedings in 2015. Additionally, in October 2015, creditors of Daewoo Shipbuilding & Marine Engineering Co., Ltd., led by Korea Development Bank, announced a restructuring plan that included cash injection and additional loans totaling ₩4.2 trillion and extensive streamlining measures, and in November 2016, Korea Development Bank agreed to swap ₩1.8 trillion of debt to equity and the Export-Import Bank of Korea agreed to issue ₩1 trillion of perpetual bonds. Amidst continued deterioration of Daewoo Shipbuilding & Marine Engineering Co., Ltd.'s financial conditions, in March 2017, Korea Development Bank and the Export-Import Bank of Korea further agreed to provide an additional ₩2.9 trillion in loans and swap ₩1.6 trillion of debt to equity, provided that other creditors and bondholders agree to certain debt-to-equity swaps and extension of maturities. In January 2016, Hanjin Heavy Industries & Construction Co., Ltd. entered into voluntary restructuring agreements with its creditors due to liquidity shortage in the wake of prolonged industry slowdown. Partly as a result of its active past efforts to reduce exposure to the shipbuilding and construction sectors, the Bank currently has limited exposure to the aforementioned troubled companies. However, if the credit quality of the Bank's exposure to large corporations, including those in the main debtor groups, declines, the Bank may be required to record additional loan loss provisions in respect of loans and impairment losses in respect of securities, which would adversely affect its financial condition, results of operations and capital adequacy. The Bank cannot assure you that the allowances it has established against these exposures will be sufficient to cover all future losses arising from such exposures, especially in the case of a prolonged or renewed economic downturn.

A limited number of the main debtor groups to which the Bank has credit exposure are subject to restructuring programs or are otherwise making significant efforts to improve their financial conditions, such as by obtaining intragroup loans and entering into agreements to further improve their capital structures. There is no assurance that there will not be future restructuring with the Bank's major corporate customers or that such restructuring will not result in significant losses to the Bank with less than full recovery. In addition, if the Government decides to pursue an aggressive restructuring policy with respect to distressed companies, Korean commercial banks, including the Bank, may face a temporary rise in delinquencies and intensified pressure for additional provisioning. Furthermore, bankruptcies or financial difficulties of large corporations, including *chaebol* groups, may have an adverse ripple effect of triggering delinquencies and impairment of the Bank's loans to small- and medium-sized enterprises that supply parts or labor to such corporations. If the Bank experiences future losses from its exposure to large corporations, including *chaebol* groups, it may have a material adverse impact on the Bank's business, financial condition and results of operations.

The asset quality of the Bank's retail loan portfolio may deteriorate.

In recent years, consumer debt, including lending to households and small unincorporated businesses, has continued to increase in Korea. The Bank's portfolio of retail loans is comprised of two principal product types, namely secured retail loans (which are primarily comprised of mortgage and home equity loans secured by real estate) and general purpose loans (which are unsecured loans and tend to carry a higher credit risk). As of December 31, 2019, the Bank's retail loan portfolio (before allowance for loan losses and deferred loan origination costs and fees) was ₩123,372 billion, representing 45.7% of its total loans outstanding. As of December 31, 2017, 2018 and 2019, the Bank's non-performing retail loans were ₩215 billion, ₩239 billion and ₩273 billion, respectively, representing non-performing loan ratios (net of charge-offs and loan sales) of 0.21%, 0.21% and 0.22%, respectively.

The Bank's large exposure to consumer debt means that it is exposed to changes in economic conditions affecting Korean consumers. For example, a rise in unemployment, an increase in interest rates or a decline in housing prices in Korea could adversely affect the ability of consumers to make payments and increase the likelihood of potential defaults. Economic difficulties in Korea that hurt consumers could result in increasing delinquencies and a decline in the asset quality of the Bank's household loan portfolio, which may in turn require the Bank to record higher provisions for credit loss and charge-offs and may materially and adversely affect the Bank's financial condition and results of operations.

Liquidity, funding management and credit ratings are critical to the Bank's ongoing performance.

Liquidity is essential to the Bank's business as a financial intermediary, and the Bank may seek additional funding in the near future to satisfy liquidity needs, meet regulatory requirements, enhance its capital levels or fund the growth of its operations as opportunities arise.

For example, Basel III includes an international framework for liquidity risk measurement, standards and monitoring, as noted above, including a new minimum liquidity standard, known as the liquidity coverage ratio ("**LCR**"), which is designed to ensure that banks have an adequate stock of unencumbered high quality liquid assets ("**HQLA**") that can be easily and speedily converted into cash in the private marketplace to survive a significant stress scenario lasting 30 calendar days. The LCR is computed as (a) the value of a banking organization's HQLA, divided by (b) its total expected net cash outflows over the next 30 calendar days under stress scenarios. The minimum LCR is 100%. In January 2013, the Basel Committee released a revised formulation of the LCR, one of two quantitative liquidity measures approved in December 2010 as part of Basel III. The Basel Committee extended the timetable for full phase-in of the LCR to the effect that the minimum LCR was set at 60% as of January 1, 2015 and thereafter was increased in annual increments of 10% so that the minimum LCR is 100% as of January 1, 2019. In December 2014, the FSC promulgated regulations to implement the liquidity requirements of Basel III, including raising the minimum LCR to 80% as of January 1, 2015 and thereafter by annual increments of 5% so that the minimum LCR for commercial banks in Korea is 100% as of January 1, 2019.

A substantial part of the liquidity and funding requirements for the Bank is met through short-term customer deposits, which typically roll over upon maturity. While the volume of the Bank's customer deposits has generally been stable over time, customer deposits have from time to time declined substantially due to the popularity of other, higher-yielding investment opportunities, namely stocks and mutual funds, for example, during times of bullish stock markets. During such times, the Bank was required to obtain alternative funding at higher costs. There is no assurance that a similar development will not occur in the future. In addition, in recent years, the Bank has faced increasing pricing competition from its competitors with respect to its deposit products. If the Bank does not continue to offer competitive interest rates to its deposit customers, it may lose its business from such customers, which has traditionally provided a stable and low-cost source of funding. In addition, even if the Bank is able to match its competitors' pricing, doing so may result in an increase in its funding costs, which may have an adverse impact on its results of operations.

The Bank also raises funds in capital markets and borrows from other financial institutions, the cost of which depends on market rates and the general availability of credit and the terms of which may limit its ability to pay dividends, make acquisitions or subject itself to other restrictive covenants. While the Bank is not currently facing liquidity difficulties in any material respect, if the Bank is unable to obtain the funding that it needs on terms commercially acceptable to it for an extended period of time for whatever reason, it may not be able to ensure its financial viability, meet regulatory requirements, implement its strategies or compete effectively.

Credit ratings affect the cost and other terms upon which the Bank is able to obtain funding. Domestic and international rating agencies regularly evaluate the Bank, and their ratings of the Bank's long-term debt are based on a number of factors, including its financial strength as well as conditions affecting the financial services industry and the Korean economy in general. There can be no assurance that the rating agencies will maintain the Bank's current ratings or outlooks or that the Bank will not experience a downgrade in its credit ratings and outlooks for reasons related to the general Korean economy or reasons specific to the Bank. Any downgrades in the Bank's credit ratings and outlooks will likely increase its cost of funding, limit its access to capital markets and other borrowings, or require it to provide additional credit enhancement in financial transactions, any of which could adversely affect its liquidity, net interest margins and profitability, and in turn, its business, financial condition and results of operations.

Changes in interest rates, foreign exchange rates, bond and equity prices, and other market factors have affected and will continue to affect the Bank's business, results of operation and financial condition.

The most significant market risks that the Bank faces are interest rate, foreign exchange and bond and equity price risks. Changes in interest rate levels, yield curves and spreads may affect the interest rate margin realized between lending and borrowing costs. Changes in foreign currency exchange rates, particularly in the Won to U.S. dollar exchange rates, affect the value of the Bank's assets and liabilities denominated in foreign currencies, the reported earnings of the Bank's non-Korean subsidiaries and income from foreign exchange dealings, and substantial and rapid fluctuations in exchange rates may cause difficulty in obtaining foreign currency-denominated financing in the international financial markets on commercial terms acceptable to the Bank or at all. The performance of financial markets may affect bond and equity prices and, therefore, cause changes in the value of the Bank's investment and trading portfolios. While the Bank has implemented risk management systems and risk thresholds to mitigate and control these and other market risks to which it is exposed, it is difficult to predict with accuracy changes in economic or market conditions and to anticipate the effects that such changes could have on the Bank's business, financial condition and results of operations.

Changes in interest rates could hurt the Bank's net interest margin due to a mismatch in the Bank's assets and liabilities structures and other factors, which could have a material adverse effect on the Bank's asset quality and profitability.

Since 2009, Korea, like many other countries, has experienced a low interest rate environment despite some marginal fluctuations, in part due to the Government's policy to stimulate the economy through active rate-lowering measures. Between 2009 and 2014, the base interest rate set by the Bank of Korea remained within the band between 2.00% and 3.25%. In an effort to support Korea's economy in light of the recent slowdown in Korea's growth and uncertain global economic prospects, the Bank of Korea reduced the base interest rate to 1.75% in March 2015, 1.50% in June 2015 and further reduced such rate to the historic low of 1.25% in June 2016.

In November 2017, the Bank of Korea raised the base interest rate to 1.50%, marking the first time it has increased the base interest rate since 2011, and further raised such rate to 1.75% in November 2018. The Bank of Korea reduced the base interest rate from 1.75% to 1.50% in July 2019, from 1.50% to 1.25% in October 2019 and from 1.25% to 0.75% in March 2020. Interest rate movements, in terms of magnitude and timing as well as their relative impact on the Bank's assets and liabilities, have a significant impact on its net interest margin and profitability, particularly with respect to its financial products that are sensitive to such movements. For example, if the interest rates applicable to the Bank's loans (which are recorded as assets) increase at a slower pace or by a thinner margin than the interest rates applicable to its deposits (which are recorded as liabilities), its net interest margin will shrink and its profitability will be negatively affected. In addition, the relative size and composition of its variable rate loans and deposits (as compared to its fixed rate loans and deposits) may also impact its net interest margin. Furthermore, the difference in the average repricing frequency of the Bank's interest-earning assets (primarily loans) compared to its interest-bearing liabilities (primarily deposits) may also impact the Bank's net interest margin. For example, since the Bank's deposits tend to have longer terms, on average, than those of its loans, the Bank's deposits are on average less sensitive to movements in the base interest rates on which the Bank's deposits and loans tend to be pegged, and therefore, a decrease in the base interest rates tends to decrease the net interest margin of the Bank while an increase in the base interest rates tend to have the opposite effect. While the Bank continually manages its assets and liabilities to minimize its exposure to interest rate volatility, such efforts by the Bank may not mitigate the impact of interest rate volatility in a timely or effective manner, and the Bank's net interest margin, and in turn its financial condition and results of operations, could suffer significantly.

The Bank cannot assure you when and to what extent the Bank of Korea will in the future adjust the base interest rate, to which the market interest rate correlates. A decision to adjust the base interest rate is subject to many policy considerations as well as market factors, including the general economic cycle, inflationary levels, interest rates in other economies and foreign currency exchange rates, among others. In general, a decrease in interest rates adversely affects the Bank's interest income due to the different maturity structure for the Bank's assets and liabilities as discussed above. In contrast, if there were to be a significant or sustained increase in interest rates, all else being equal, such movement would lead to a decline in the value of traded debt securities and could also raise the Bank's funding costs, while reducing loan demand, especially among retail customers. Rising interest rates may therefore require the Bank to re-balance its assets and liabilities in order to minimize the risk of potential mismatches in its asset liability management and to maintain its profitability. In addition, rising interest rates may adversely affect the Korean economy and the financial condition of the Bank's corporate and retail borrowers, which in turn may lead to deterioration of asset quality for its credit portfolio. Since most of the Bank's retail and corporate loans bear interest at rates that adjust periodically based on prevailing market rates, a sustained increase in interest rates will increase the funding costs of the Bank's borrowers and may adversely affect their ability to make payments on their outstanding loans.

The Bank is required to maintain its capital ratios above a minimum required level, and the failure to so maintain could result in the suspension of some or all of its operations.

The Bank, like other commercial banks in Korea, is required to maintain specified capital adequacy ratios. For example, since January 1, 2015, the Bank is required to maintain a minimum common equity Tier I capital adequacy ratio of 4.5%, a Tier I capital adequacy ratio of 6.0% and a total capital (BIS) ratio of 8.0%. These ratios measure the respective regulatory capital as a percentage of risk-weighted assets on a consolidated basis and are determined based on guidelines of the FSC. In addition, as further described below, the Bank is also required to maintain a capital conservation buffer and additional capital as a domestic systemically important bank and may be required to maintain a countercyclical capital buffer. As of December 31, 2019, the common equity Tier I capital adequacy ratio, the Tier I capital adequacy ratio and the total capital (BIS) ratio of the Bank on a consolidated basis were 12.75%, 13.30% and 15.91%, respectively.

While the Bank currently maintains capital adequacy ratios in excess of the required regulatory minimum levels, the Bank may not be able to continue to satisfy its capital adequacy requirements for a number of reasons, including an increase in risky assets and provisioning expenses, substitution costs related to the disposal of problem loans, declines in the value of its securities portfolio, adverse changes in foreign currency exchange rates, changes in the capital ratio requirements, the guidelines regarding the computation of capital ratios, or the framework set by the Basel Committee upon which the guidelines of the FSC are based, or other adverse developments affecting the Bank's asset quality or equity capital.

In December 2010, the Basel Committee issued final rules in respect of (i) a global regulatory framework for more resilient banks and banking systems and (ii) an international framework for liquidity risk measurement, standards and monitoring, which together are commonly referred to as "Basel III." Under Basel III, Tier I capital is defined to include common equity Tier I and additional Tier I capital. Common equity Tier I capital is a new category of capital primarily consisting of common stock, capital surplus, retained earnings and other comprehensive income (progressively phased into the capital ratio calculation over several years). The new minimum capital requirements, including the minimum common equity Tier I requirement of 4.5% and additional mandatory capital conservation buffer requirement of 2.5%, have been fully implemented as of January 1, 2019. Additional discretionary countercyclical capital buffer requirements are also expected to be phased in, which will range at the discretion of national regulators between 0% and 2.5% of risk-weighted assets. Basel III also introduces a minimum leverage ratio requirement. On December 7, 2017, the Basel Committee finalized several key methodologies for measuring risk-weighted assets. The revisions include a standardized approach for credit risk, a standardized approach for operational risk, revisions to the credit valuation adjustment (CVA) risk framework and constraints on the use of internal models. The Basel Committee had also previously finalized a revised standardized model for counterparty credit risk, revisions to the securitization framework and its fundamental review of the trading book, which updates both modeled and standardized approaches for market risk measurement. The revisions also include a output floor set at 72.5% of total risk-weighted assets based on the revised standardized approaches to limit the extent to which banks can reduce risk-weighted asset levels through the use of internal models. The Basel Committee has recommended that banks implement the 2017 reforms by January 2022 with respect to the revised standardized approach for credit and operational risk, revised

CVA framework, and revised market risk framework. The 72.5% capital floor is subject to a six-year phase-in period, beginning at 50% at January 2020 and increasing to 72.5% by January 2027. Upon implementation, banks in jurisdictions that permit reference to external credit ratings will be able to take into account external credit ratings in determining the risk weights for certain exposure classes, and different mortgage risk weights will apply depending on the loan-to-value ratio of the mortgage. In addition, the 2017 reforms remove the option to use internal ratings-based approaches for measurement of equity exposures, thus requiring use of the standardized approach. Banks will also need to reflect internal loss data in evaluating operational risk and comply with the principles for sound management of operational risk.

In order to implement the capital requirements under Basel III in Korea, the Regulation on the Supervision of the Banking Business was amended, effective December 1, 2013. Under the amended Regulation on the Supervision of the Banking Business, effective from January 1, 2015, commercial banks in Korea are required to maintain a minimum common equity Tier I ratio of 4.5%, a minimum Tier I capital ratio of 6.0% and a minimum total capital (BIS) ratio of 8.0%. The Regulation on the Supervision of the Banking Business was further amended on December 26, 2014, to implement the liquidity coverage ratio requirements under Basel III in increments of 5% annually, from 80% as of January 1, 2015 to 100% as of January 1, 2019. Capital conservation buffer requirements have also been phased in from January 1, 2016 in increments of 0.625% annually, to the effect that commercial banks in Korea are required to maintain a capital conservation buffer of 2.5% as of January 1, 2019. If a commercial bank fails to maintain such capital conservation buffer requirements, such bank will be subject to certain restrictions relating to its use of income, such as distributing dividends and purchasing treasury stock. As of January 1, 2016, the FSC implemented Basel III requirements relating to accumulation of additional capital for systemically important banks and countercyclical capital buffer requirements. Each year, the FSC may designate banks with significant influence (based on size and connectivity with other financial institutions) on the domestic financial system as a domestic systemically important bank and require the accumulation of additional capital in accordance with the highest of: (i) ratio of common equity capital to risk-weighted assets, ranging from 0.0% to 2.0%, depending on the systematic importance evaluation score, (ii) if the bank's holding company is a domestic systemically important bank holding company, the capital ratio corresponding to the additional capital required for the bank holding company under the Financial Holding Company Supervision Regulations, or (iii) if the bank is also a global systemically important bank, as defined by the Basel Committee, the capital ratio as required by the Basel Committee. Shinhan Financial Group and the Bank were selected as a domestic systemically important bank holding company and domestic systemically important bank, respectively, from 2016 through 2020. According to the instructions of the FSC, domestic systematically important banks including the Bank have been required to maintain an additional capital buffer of 0.25% since January 1, 2016, with such buffer increased by 0.25% annually to reach 1.00% as of January 1, 2019. The FSC may also, upon quarterly review, determine and require banks to accumulate a required level of countercyclical capital buffer within the range of 0% to 2.5% of risk-weighted assets, taking into account factors such as the degree of increase in credit relative to the gross domestic product. Since March 2016, the FSC has maintained countercyclical capital buffer requirements at 0%, and the FSC has maintained the countercyclical capital buffer requirement at 0% for the first quarter of 2020. In addition, the Regulation on the Supervision of the Banking Business is expected to be amended during 2020 to introduce an additional countercyclical capital buffer requirement that specifically addresses the increase of credit in the retail sector. This is in addition to and separate from the existing general countercyclical capital buffer requirements that take into account the degree of increase in credit generally relative to the gross domestic product. The Detailed Regulation on the Supervision of the Banking Business was also amended on June 30, 2018 to add "concentration of risk in the retail sector" as an additional criterion when the FSS evaluates the risk management systems of Korean banks.

The Bank is currently, and has been, in full compliance with Basel III requirements as implemented in Korea since its introduction in December 2013. However, there is no assurance that the Bank will continue to be able to be in compliance with Basel III requirements. New requirements under Basel III may require an increase in the Bank's credit risk capital requirements in the future, which may require the Bank to either improve its asset quality or raise additional capital. In addition, if the Bank's capital adequacy ratios were to fall below the required levels, the FSC might impose penalties ranging from a warning to suspension or revocation of its business licenses. In order to maintain the capital adequacy ratios above the required levels, the Bank may be required to raise additional capital through equity financing, but there is no assurance that it will be able to do so on commercially favorable terms or at all and, even if successful, any such capital raising may have a dilutive effect on the Bank's shareholders with respect to their interest in the Bank.

A decline in the value of the collateral securing the Bank's loans or the Bank's inability to fully realize the collateral value may adversely affect the Bank's credit portfolio.

Most of the Bank's mortgage and home equity loans are secured by borrowers' homes, other real estate, other securities and guarantees (which are principally provided by the Government and other financial institutions), and a substantial portion of the Bank's corporate loans are also secured, including by real estate. As of December 31, 2019, the secured portion of the Bank's loans (before allowance for loan losses and deferred loan origination costs and fees) amounted to ₩121,944 billion, representing 49.1% of its total loans. There is no assurance that the collateral value will not materially decline in the future. The Bank's general policy for mortgage and home equity loans is to lend up to 45% to 82% of the appraised value of the collateral, but subject to the maximum loan-to-value ratio, debt-to-income ratio and debt service ratio requirements for mortgage loans implemented by the Government, and to periodically re-appraise such collateral. For a description of loan-to-value ratio and other requirements implemented by the Government, see "*Business — Business Overview — Retail Banking Services — Retail Lending Activities*." In order to mitigate the Bank's loss in the event of a decrease in the value of collateral, the Bank has made effort to increase the proportion of installment principal repayment-based loans and manage the loan-to-value ratio of loans. As of December 31, 2019, installment principal repayment-based housing loans accounted for 49.6% of the housing loans extended by the Bank, and the loan-to-value ratio of mortgage and home equity loans of the Bank was 49.6%. Despite these efforts, however, if the real estate market in Korea experiences a downturn, the value of the collateral may fall below the outstanding principal balance of the underlying mortgage loans. Borrowers of such under-collateralized mortgages or loans may be forced to pay back all or a portion of such mortgage loans or, if unable to meet the collateral requirement through such repayment, sell the underlying collateral, which sales may lead to a further decline in the price of real estate in general and set off a chain reaction for other borrowers due to the further decline in the value of collateral. Declines in real estate prices reduce the value of the collateral securing the Bank's mortgage and home equity loans, and such reduction in the value of collateral may result in the Bank's inability to cover the uncollectible portion of its secured loans. A decline in the value of the real estate or other collateral securing the Bank's loans, or its inability to obtain additional collateral in the event of such decline, may result in the deterioration of its asset quality and require the Bank to make additional loan loss provisions. In Korea, foreclosure on collateral generally requires a written petition to a Korean court. Foreclosure procedures in Korea generally take 10 to 14 months from initiation to collection depending on the nature of the collateral, and foreclosure applications may be subject to delays and administrative requirements, which may result in a decrease in the recovery value of such collateral. There can be no assurance that the Bank will be able to realize the full value of collateral as a result of, among others, delays in foreclosure proceedings, defects in the perfection of collateral and general declines in collateral value. The Bank's failure to recover the expected value of collateral could expose it to significant losses.

Guarantees received in connection with the Bank's real estate financing may not provide sufficient coverage.

The Bank, alone or together with other financial institutions, provides financing to real estate development projects, which are concentrated largely in the construction of residential complexes. Developers in Korea commonly use project financing to acquire land and pay for related project development costs. As a market practice, lenders in project financing, including the Bank, generally receive from general contractors a performance guarantee for the completion of projects by the developers as well as a payment guarantee for the loans raised by a special purpose financing vehicle established by the developers in order to procure the construction orders, as the developers tend to be small and highly leveraged. The Bank has actively managed and reduced its real estate project financing-related exposure, particularly during sustained downturns in the Korean real estate market. As of December 31, 2019, the total outstanding amount of the Bank's real estate project financing-related exposure was ₩3.7 trillion. However, if defaults were to significantly increase under the Bank's existing loans to real estate development projects and the general contractors fail to pay the guaranteed amount necessary to cover the amount of the Bank's financings, this may have an adverse effect on the Bank's business, financial condition and results of operations.

Any deterioration in the asset quality of the Bank's guarantees and acceptances will likely have a material adverse effect on its financial condition and results of operations.

In the normal course of the Bank's banking activities, it makes various commitments and incurs certain contingent liabilities in the form of guarantees and acceptances. Financial guarantees, which are contracts that require the Bank to make specified payments to reimburse the beneficiary of the guarantee for a loss such beneficiary incurs because the debtor in respect of which the guarantee is given fails to make payments when due in accordance with the terms of the relevant debt instrument, are recognized initially at fair value, and such initial fair value is amortized over the life of the financial guarantee. Other guarantees are recorded as off-balance sheet items in the notes to the Bank's financial statements and those guarantees that the Bank has confirmed to make payments are recorded on the statements of financial position. As of December 31, 2019, the Bank had aggregate guarantees and acceptances of ₩14,893 billion, for which it provided allowances for losses of ₩91.1 billion.

If there is significant deterioration in the quality of assets underlying the Bank's guarantees and acceptances, the Bank's allowances may be insufficient to cover actual losses resulting in respect of these liabilities.

The Bank may experience significant losses from its investments and, to a lesser extent, trading activities due to market fluctuations.

The Bank enters into and maintains large investment positions in fixed income products, primarily through its treasury and investment operations. These activities are described in "*Business — Business Overview — Other Banking Services — Treasury*" and "*— Securities Investment and Trading*." The Bank also maintains smaller trading positions, including equity and equity-linked securities and derivative financial instruments, as part of its banking operations. Taking these positions entails making assessments about financial market conditions and trends. The revenues and profits that the Bank derives from many of these positions and related transactions are dependent on market prices, which are beyond the Bank's control. When the Bank owns assets such as debt or equity securities, a decline in market prices, for example, as a result of fluctuating market interest rates or stock market indices, can expose it to trading and valuation losses. If market prices move in a way that the Bank has not anticipated, it may experience losses. In addition, when markets are volatile and subject to rapid changes in price directions, actual market prices may be contrary to the Bank's assessments and lead to lower than anticipated revenues or profits, or even result in losses, with respect to the related transactions and positions.

The Bank may generate losses from its commission- and fee-based business.

The Bank provides, and seeks to expand the offerings of, commission- and fee-based services. Downturns in stock markets typically lead to a decline in the volume of transactions that the Bank executes for its customers and, therefore, a decline in its non-interest revenues. In addition, because the fees that the Bank charges for managing its clients' portfolios are often based on the size of the assets under management, a downturn in the stock market, which has the effect of reducing the value of its clients' portfolios or increasing the amount of withdrawals, also generally reduces the fees the Bank receives from its trust account management and other asset management services. Even in the absence of a market downturn, below-market performance by the Bank's various account services may result in increased withdrawals and reduced cash inflows, which would reduce the revenue it receives from these businesses. In addition, protracted declines in asset prices can reduce liquidity for assets held by the Bank and lead to material losses if the Bank cannot close out or otherwise dispose of deteriorating positions in a timely way or at commercially reasonable prices.

The Bank may incur losses associated with its counterparty exposures.

The Bank faces the risk that counterparties will be unable to honor their contractual obligations to the Bank. These parties may default on their obligations to the Bank due to bankruptcy, lack of liquidity, operational failure or other reasons. This risk may arise, for example, from entering into swaps or other derivative contracts under which counterparties have obligations to make payments to the Bank or in executing currency or other trades that fail to settle at the required time due to non-delivery by the counterparty or systems failure by clearing agents, exchanges, clearing houses or other financial intermediaries. Any realization of counterparty risk may adversely affect the business, operations and financial condition of the Bank.

The Bank's risk management policies and procedures may not be fully effective at all times.

In the course of the Bank's operations, it must manage a number of risks, such as credit risks, market risks and operational risks. The Bank seeks to monitor and manage its risk exposures through a comprehensive risk management platform, encompassing centralized risk management organization and credit evaluation systems, reporting and monitoring systems, early warning systems and other risk management infrastructure, using a variety of risk management strategies and techniques. See "*Risk Management*." Although the Bank devotes significant resources to developing and improving its risk management policies and procedures and expects to continue to do so in the future, its risk management practices may not be fully effective at all times in eliminating or mitigating risk exposures in all market environments or against all types of risk, including risks that are unidentified or unanticipated. For example, in the past, a limited number of the Bank's personnel engaged in embezzlement of substantial amounts for an extended period of time before such activities were detected by the Bank's risk management systems. In response to these incidents, the Bank has strengthened its internal control procedures by, among others, implementing a real-time monitoring system, but there is no assurance that such measures will be sufficient to prevent similar employee misconducts in the future. Management of credit, market and operational risk requires, among others, policies and procedures to record properly and verify a large number of transactions and events, and the Bank cannot assure you that these policies and procedures will prove to be fully effective at all times against all the risks that the Bank faces.

The implementation of K-IFRS 1109 with effect from January 1, 2018 renders certain of the Bank's historical financial information as of and for the years ended December 31, 2017 not directly comparable with that of the Bank's financial information after January 1, 2018.

With effect from January 1, 2018, K-IFRS 1109 'Financial Instruments' has replaced in entirety previous guidance in K-IFRS 1039. Following the adoption of K-IFRS 1109, the Bank is required to re-classify and re-measure (including impairment measurement) certain of its financial instruments from January 1, 2018 without requiring any restatement of the corresponding figures of the prior period. Based on the method of adoption allowed under K-IFRS 1109, the Bank is permitted to adjust its shareholder equity from January 1, 2018 without requiring any restatement of the corresponding figures of the prior period where the difference between the new carrying amount and original carrying amount was recognized in retained earnings. The difference between the new carrying amount and original carrying amount amounted to ₩123 billion as of January 1, 2018. As there is no requirement of any restatement by the Bank of affected financial figures, with the implementation of K-IFRS 1109, certain of the Bank's historical financial information as of and for the years ended December 31, 2017 is not directly comparable against that of the Bank's financial information after January 1, 2018. Investors must therefore exercise caution when making comparisons of any financial figures after January 1, 2018 against the Bank's historical financial figures prior to January 1, 2018 and when evaluating the Bank's financial condition, results of operations and results. For further information regarding the adoption of K-IFRS 1109, see "*Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies — Recent Accounting Changes*" and Note 3 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2017 and 2018 included elsewhere in this offering circular.

The implementation of K-IFRS 1109 has caused the Bank to increase its allowance for impairment losses to cover expected credit loss on its loan portfolio and other financial instruments and may increase volatility in the Bank's profit or loss.

Following the adoption of K-IFRS 1109, the "incurred loss" model under the previous guidance for loans, debt instruments, lease receivables, contractual assets and financial guarantee contracts has been replaced with a forward-looking "expected credit loss" model, and therefore impairment losses are likely to be recognized earlier, on a more forward-looking basis and on a broader scope of financial instruments than using the incurred loss model under the previous guidance. Accordingly, as of January 1, 2018, the Bank increased its credit loss allowance from ₩1,676 billion to ₩2,059 billion as a result of adopting K-IFRS 1109. K-IFRS 1109 also introduces additional requirements for a financial asset to be measured at amortized costs or fair value through other comprehensive income compared to the previous guidance and therefore would potentially increase the proportion of financial assets that are measured at fair value through profit or loss, thereby increasing volatility in the Bank's profit or loss. For further information regarding the adoption of K-IFRS 1109, see "*Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies — Recent Accounting Changes*" and Note 3 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2017 and 2018 included elsewhere in this offering circular.

Labor unrest may adversely affect the Bank's operations.

As of December 31, 2019, 9,464 employees were members of a labor union, and to date, the Bank has not experienced any significant difficulties in its relationships with its employees. However, any significant labor unrest in the Korean financial industry or other sectors of the Korean economy could adversely affect the Bank's operations, as well as the operations of many of the Bank's customers and their ability to repay their loans, and could affect the financial conditions of Korean companies in general. Such developments would likely have an adverse effect on the Bank's business, financial condition, results of operations and capital adequacy.

On February 28, 2018, the National Assembly passed a bill to amend the Labor Standards Act, pursuant to which the maximum working hours of employees will be reduced from 68 hours per week to 52 hours per week. This new maximum working hours restriction under the amended Labor Standards Act applied to workplaces with 300 or more workers since July 1, 2018 and workplaces with 50 or more workers since January 1, 2020, and will be further extended to workplaces with five or more workers from July 1, 2021. Accordingly, the Bank has reformed its workforce structure, including rearranging staffing where necessary, in order to improve efficiency and comply with the amended Labor Standards Act and believes, as of the date of this offering circular, that the amended Labor Standards Act has not had a material adverse impact on the Bank's operations. However, there can be no assurance that the amended Labor Standards Act will not have a material adverse effect on the Bank's results of operations and financial condition.

The Bank may experience disruptions, delays and other difficulties relating to its information technology systems.

The Bank relies on its information technology systems to seamlessly provide its wide-ranging financial services as well as for its daily operations, including billing, online and offline financial transactions settlement and record keeping. The Bank continually upgrades, and makes substantial expenditures to upgrade, its group-wide information technology system, including in relation to customer data-sharing and other customer relations management systems, particularly in light of the heightened cyber security risks from advances in technology. Despite the Bank's best efforts, however, it may experience disruptions, delays, cyber or other security breaches or other difficulties relating to its information technology systems, and may not timely upgrade its systems as currently planned. Any of these developments may have an adverse effect on the Bank's business, particularly if its customers perceive it to not be providing the best-in-class cyber security systems and failing to timely and fully rectify any glitches in the Bank's information technology systems.

The Bank's activities are subject to cyber security risk.

The Bank's activities have been, and will continue to be, subject to an increasing risk of cyber-attacks, the nature of which is continually evolving. Cyber security risks include unauthorized access, through system-wide "hacking" or other means, to privileged and sensitive customer information, including passwords and account information and illegal use thereof. Cyber security risk is generally on the rise as a growing number of the Bank's customers increasingly rely on its Internet- and mobile phone-based banking services for various types of financial transactions. While the Bank vigilantly protects customer data through encryption and other security programs and has made substantial investments to build and upgrade its systems and defenses to address the growing threats from cyber-attacks, there is no assurance that such data will not be subject to future security breaches. In addition, there can be no assurance that the Bank will not experience a leakage of customer information or other security breaches as a result of illegal activities by its employees, outside consultants or hackers, or otherwise.

For example, in March 2013, the Bank experienced a temporary interruption in providing online financial services due to large-scale cyber-attacks by unidentified sources on the security systems of major broadcasting networks and financial institutions in Korea. The interruption of the Bank's online financial services lasted approximately 90 minutes, after which the Bank's online system resumed without further malfunction. The FSS conducted an investigation into the incident and found that the Bank had not properly maintained its information technology administrator account and vaccine server. As a result, in December 2013, the FSS notified the Bank of an institutional caution (which does not give rise to significant sanctions unlike in the case of repeated institutional warnings), and imposed disciplinary actions against five of the Bank's employees. The Bank does not believe such incident resulted in any material loss or leakage of customer information or other sensitive data.

Major financial institutions in Korea and around the world have also fallen victim to large-scale data leakage in the past. In December 2013, it was reported that there was a leakage of personal information of approximately 130,000 customers of Standard Chartered Bank and Citibank in Korea, which leakage was attributed to a third party sub-contractor in the case of Standard Chartered Bank, and an employee in the case of Citibank. In addition, in January 2014, it was reported that there was a leakage of personal information of approximately 100 million customers of NH Card, Lotte Card and KB Card in Korea due to illegal access to such information by an employee of a third party credit information company in the course of developing information technology programs for these three credit card companies. In 2017, Equifax Inc., a U.S. credit reporting company, was reported to have suffered a breach of personal information of over 143 million people.

Other than the cyber security attack in March 2013 as discussed above, the Bank has not experienced any material security breaches in the past, including any similar large scale leakage of customer information. In order to minimize the risk of security breaches related to customer and other proprietary information, the Bank has taken a series of preventive measures such as the adoption and implementation of a best-in-class information security system and reinforcement of internal control measures. The Bank is fully committed to maintaining the highest standards of cyber security and consumer protection measures and upgrading them continually. The Bank has implemented the ISO 27001-certified security management system and has obtained the Information Security Management System certification. The Bank believes that such certification represents third-party validations that the Bank is in compliance with best-in-class international standards on matters of information security. The Bank's Integrated Security Control Center's security management system enables the Bank to continuously monitor for signs of potential cyber-attacks and provides the Bank with advance warnings that will allow the Bank to promptly respond to such attacks. The Bank's security management system continuously monitors for signs of potential cyber-attacks and is designed to provide early warning alerts to enable prompt action by the Bank. In order to prevent intentional and accidental security issues by the Bank's employees, the Bank have created a violation monitoring system, reinforcing its security measures by preemptively identifying various scenarios of threats and by collecting and analyzing different types of data that allows it to quickly identify any potential security violations. Moreover, the Bank established a new information security lab to build a continuous security research and development system to respond to hacking and other cyber threats. Through these measures, the Bank is developing technical capabilities necessary to respond to the latest security threats. The Bank also provides intensive employee training to its information technology staff and other employees on cyber security and has adopted advanced security infrastructure (including through hiring a highly competent team of information security experts) for online financial services such as mandatory website certification and keyboard security functions. In addition, reviews of the Bank's system are conducted through periodic audits and simulation reviews by external experts. In addition, in compliance with applicable regulations, the Bank maintains insurance to cover cyber security breaches up to ₩10 billion. In addition, in light of the growing use of mobile devices to access financial services, the Bank has implemented security measures (including encryption and service terminal monitoring) to provide a secure mobile banking service as well as to prevent illegal leakage or sharing of customer data and otherwise enhance customer privacy.

The Bank is also keenly aware of the litigation and regulatory sanctions risks that may arise from security breaches and is aggressively reinforcing a culture that stresses safety and good custodianship as among its highest priorities. Furthermore, the Bank is actively taking steps to implement preventive and other steps recommended or required by the regulatory authorities in relation to actual and potential financial scams. However, given the unpredictable and continually evolving nature of cyber security threats due to advances in technology or other reasons, there is no assurance that, notwithstanding the Bank's best efforts at maintaining the best-in-class cyber security systems, the Bank will not be vulnerable to major cyber security attacks in the future.

The public is developing heightened awareness about the importance of keeping their personal data private, and the financial regulators are placing greater emphasis on data protection by financial service providers. For example, under the Personal Information Protection Act, as last amended in October 2017, financial institutions, as personal information manager, may not collect, store, maintain, utilize or provide resident registration numbers of their customers, unless other laws or regulations specifically request or permit the management of resident registration numbers. Further, under the Use and Protection of Credit Information Act, as last amended in December 2018, a financial institution has a higher duty to protect credit information, meaning information necessary to assess the creditworthiness of the counterparty to financial transactions and other commercial transactions. Such regulations have considerably restricted a financial institution's ability to transfer or provide the information to its affiliate or holding company, and treble damages can be imposed on a financial institution for a leakage of such information. In addition, under the Electronic Financial Transaction Act, as last amended in April 2017 with effect from October 2017, a financial institution is primarily responsible for compensating its customers harmed by the financial institution's cyber security breach, even if the breach is not directly attributable to the financial institution. Recently, on January 9, 2020, the Korean National Assembly passed amendments to three major data privacy laws (the Personal Information Protection Act, the Act on the Promotion of Information and Communications Network Utilization and Information Protection and the Act on the Use and Protection of Credit Information), expanding the scope of personal information that may be shared among financial institutions. With this, the Bank expects cyber security and ensuring confidentiality of customers' information to become more important than ever for financial institutions. The Bank maintains an integrated system that closely monitors its customer information to ensure compliance with data protection laws and regulations, as well as its internal policies.

If a cyber or other security breach were to happen with respect to the Bank, it may result in litigation by affected customers or other third parties (including class actions), compensation for any losses suffered by victims of cyber security attacks, reputational damage, loss of customers, heightened regulatory scrutiny and related sanctions, more stringent compliance with the present and future regulatory restrictions, and other costs related to damage control, reparation and reinforcement of information security systems, any of which may have a material adverse effect on its business, financial condition and results of operations.

Legal claims and regulatory risks arise in the conduct of the Bank's business.

In the ordinary course of the Bank's business, it is subject to regulatory oversight and potential legal and administrative liability risk. The Bank is also subject to a variety of other claims, disputes, legal proceedings and government investigations in Korea and other jurisdictions where it is active. See "*Business — Legal Proceedings and Other Matters*." These types of proceedings may expose the Bank to substantial monetary and/or reputational damages and legal defense costs, injunctive relief, criminal and civil penalties and the potential for regulatory restrictions on its businesses. The outcome of these matters cannot be predicted and they could adversely affect the Bank's future business.

While the Bank plans to rigorously defend its positions in the lawsuits or other regulatory proceedings against the Bank, it is difficult to predict the final outcome of such cases. The total amount in dispute may increase during the course of litigation and other lawsuits may be brought against the Bank based on similar allegations. Accordingly, these lawsuits and other proceedings may have a material adverse effect on the Bank's business, financial condition and results of operations.

The extent to which the recent coronavirus (COVID-19) outbreak impacts the Bank's business, results of operations and financial condition will depend on future developments, which are highly uncertain and cannot be predicted.

The rapid and diffuse spread of the recent coronavirus (COVID-19) and global health concerns relating to this outbreak have had severe negative impact on, among other things, financial markets, liquidity, economic conditions and trade and could continue to do so or could worsen for an unknown period of time, which could in turn have a material adverse impact on the Bank's business, results of operations and financial condition, including liquidity, asset quality and growth. The extent to which the COVID-19 outbreak impacts the Bank's business, results of operations and financial condition will depend on future developments, including the timeliness and effectiveness of actions taken or not taken to contain and mitigate the effects of COVID-19 both in Korea and internationally by governments, central banks, healthcare providers, health system participants, other businesses and individuals, which are highly uncertain and cannot be predicted. In particular, a number of governments and organizations have revised GDP growth forecasts for 2020 downward in response to the economic slowdown caused by the spread of COVID-19, and it is possible that the COVID-19 outbreak will cause a prolonged global economic crisis or recession. Also, if any of the Bank's employees or customers are suspected to have been infected or identified as a possible source of COVID-19, the Bank may be required to quarantine the employees as well as any others that had come into contact with them and may also be required to disinfect the affected bank branches or other offices and therefore suffer a temporary suspension of business operations. Any of these factors could have a material adverse effect on the Bank's results of operations and financial condition, including its liquidity, asset quality and growth.

Risks Relating to Law, Regulation and Government Policy

The Bank is a heavily regulated entity and operates in a legal and regulatory environment that is subject to change, and violations could result in penalties and other regulatory actions.

As a financial services provider, the Bank is subject to a number of regulations that are designed to maintain the safety and soundness of Korea's financial system, to ensure the Bank's compliance with economic and other obligations and to limit its risk exposure. These regulations may limit the Bank's activities, and changes in these regulations may increase its costs of doing business. Regulatory agencies frequently review regulations relating to the Bank's business and implement new regulatory measures, including increasing the minimum required provisioning levels or capital adequacy ratios applicable to the Bank from time to time. The Bank expects the regulatory environment in which it operates to continue to change. Changes in regulations applicable to the Bank and the Bank's business or changes in the implementation or interpretation of such regulations could affect it in unpredictable ways and could adversely affect its business, results of operations and financial condition.

Upon implementation of the Government-proposed Financial Consumer Protection Act (currently pending at the National Assembly's subcommittee for review of the bill), banks as financial instrument distributors will be subject to heightened investor and consumer protection measures, including stricter distribution guidelines, improved financial dispute resolution system, increased liability for damages borne by direct financial instrument distributors and newly imposed penalty surcharges. The Bank may also become subject to other restrictions on its operations as a result of future changes in laws and regulations, including more stringent liquidity and capital requirements under Basel III, which are being adopted in phases in Korea in consideration of, among other things, the pace and scope of international adoption of such requirements. Any of these regulatory developments may have a material adverse effect on the Bank's ability to expand operations or adequately manage its risks and liabilities.

In addition, violations of law and regulations could expose the Bank to significant liabilities and sanctions. For example, the FSS conducts periodic audits on the Bank and, from time to time, the Bank has received institutional warnings from the FSS. If the FSS determines as part of such audit or otherwise that the Bank's financial condition is unsound or that the Bank has violated applicable law or regulations, including FSS orders, or if the Bank fails to meet the applicable requisite capital ratio or the capital adequacy ratio, as the case may be, set forth under Korean law, the FSS may ask the FSC to order, among other things, cancellations of authorization, permission or registration of the business, suspensions of a part or all of the business, closures of branch offices, recommendations for dismissal of officers or suspensions of officers from performing their duties, or may order, among other things, institutional warnings, institutional cautions, reprimanding warnings on officers, cautionary warnings on officers or cautions on officers. If any of such measures is imposed on the Bank as a result of unsound financial condition or failure to comply with minimum capital adequacy requirements or for other reasons, it will have a material adverse effect on the Bank's business, financial condition and results of operations. In October 2018, the FSS requested the Bank to submit supporting documents in connection with allegations of inadequate compliance controls. In November 2018, the FSS notified the Bank of an institutional caution for alleged deficiencies in its customer due diligence. In December 2019, the FSS notified the Bank of an institutional caution and imposed an administrative fine of ₩3 billion for alleged prohibited activities, including promotional activities for specified money trusts, investment solicitation for derivatives and management of trust properties.

For further details on the principal laws and regulations applicable to the Bank, see "*Supervision and Regulation*."

The Government may encourage targeted lending to certain sectors in furtherance of policy objectives, and the Bank may take this factor into account.

The Government has encouraged and may in the future encourage targeted lending to certain types of enterprises and individuals in furtherance of government initiatives. The Government, through its regulatory bodies such as the FSC, from time to time announces lending policies to encourage Korean banks and financial institutions, including the Bank, to lend to particular industries, business groups or customer segments, and, in certain cases, has provided lower cost funding through loans made by the Bank of Korea for further lending to specific customer segments. For example, the Government has taken and is taking various initiatives to support small- and medium-sized enterprises and low-income individuals, who were disproportionately affected by the downturn in the Korean and global economy in the late 2000s and have yet to fully recover. As part of these initiatives, the FSS has recently encouraged banks in Korea to increase lending to small- and medium-sized enterprises in order to ease the financial burden on such enterprises amid sluggish economic recovery, and in February 2016, the Bank of Korea announced that it would increase support for loans to small- and medium-sized enterprises, in anticipation of growing liquidity difficulties among such enterprises in light of the sustained sluggishness of the general economy and to stimulate trade exports, infrastructure investments and entrepreneurial efforts. The financial regulators have also adopted several measures designed to improve certain lending practices of the commercial banks which practices were perceived as having an unduly prohibitive effect on extending loans to small- to medium-sized enterprises. In addition, as a way of supporting the Government's initiative to assist promising startups, in February 2015, the financial regulators announced that they would encourage the banks in Korea to increase lending to technology companies in the small- to medium-sized enterprise segment and to enhance technology-related credit review capabilities. Pursuant to these initiatives, the Bank has reinforced its credit review process with increased staff and developed a technology-related credit assessment system, resulting in a Level 4 designation for 2019, the highest among Korean commercial banks, by the FSC in terms of technology evaluation capability. According to the Korea Federation of Banks, the aggregate balance of loans to technology companies in the small- to medium-sized enterprise segment reached ₩127.7 trillion, ₩163.8 trillion and ₩191.7 trillion as of December 31, 2017, 2018 and September 2019, respectively. The Bank's total lending to technology companies extended during the year ended December 31, 2017, 2018 and 2019 was ₩14.5 trillion, ₩18.1 trillion and ₩21.7 trillion, respectively, and the total balance of outstanding loans to technology companies as of December 31, 2019 was ₩26.4 trillion.

Furthermore, in response to an increasing level of consumer debt and amid concerns over the debt-servicing capacity of retail borrowers if interest rates were to rise, the FSC announced in February 2014 that it plans to increase the proportion of fixed interest rate loans and installment principal repayment-based loans within the total housing loans extended by commercial banks (which loans have historically been, for the most part, variable interest rate loans with the entire principal being repaid at maturity, which is usually rolled over on an annual basis). According to this plan, the target proportion for fixed interest rate loans was set at 35%, 37.5% and 40% and the target proportion for installment principal repayment-based housing loans was set at 35%, 40% and 45%, each by the end of 2015, 2016 and 2017, respectively. Amid concerns about increasing household debt, in May 2016 the target proportion for fixed interest rate loans and installment principal repayment-based housing loans for 2016 were increased to 40% and 45%, respectively, and in February 2017 the target proportion for fixed interest rate loans and installment principal repayment-based housing loans for 2017 were increased to 45% and 55%, respectively. The target proportion for fixed interest rate loans for 2018 and 2019 were subsequently increased to 47.5% and 48%, respectively, while the target proportion for installment principal repayment-based housing loans remained at 55% for 2018 and 2019. In addition, an expanded tax deduction limit for interest repayment is granted for loans with maturity of 10 years or more (compared to 15 years or more prior to this plan). The FSC announced that it would examine whether banks meet their targets on an annual basis.

In furtherance of the policy to expand the proportion of fixed rate housing loans, the FSC implemented "Relief Debt Conversion" program from March 24 to March 27, 2015 and from March 30 to April 3, 2015, respectively, under which borrowers of eligible housing loans (namely, loans that have been in existence for one year or more since the original loan date, with no delinquency in the past six months, with principal amounts of ₩500 million or less and for houses valued at ₩900 million or less that are on a floating rate basis and/or an interest payment only basis) might convert such loans to new fixed rate loans in respect of which the borrowers would be required to repay the principal and interest in installment for a term of 10, 15, 20 or 30 years without a grace period, provided that the new loans pass the maximum loan-to-value ratio of 70% (irrespective of the location of the property) and the maximum debt-to-income ratio of 60% (only in respect of apartment units located in the greater Seoul metropolitan area, subject to certain exceptions). The borrowers were allowed to convert the original loans only at the banks that extended such loans. According to the FSC, under this program, approximately 327,000 borrowers converted loans in the aggregate amount of ₩31.7 trillion to fixed rate loans, of which the Bank accounted for approximately 13.5%. Due in large part to such initiatives, fixed interest rate loans and installment principal repayment-based loans accounted for 44.2% and 51.0%, respectively, of the total housing loans extended by commercial banks in Korea as of June 30, 2018, according to data published by the Government in December 2018. Fixed interest rate and installment principal repayment-based housing loans accounted for 45.8% and 49.6%, respectively, of the housing loans extended by the Bank as of December 31, 2019.

On August 26, 2019, the FSC announced that it will implement an additional round of the program for up to ₩20 trillion. Despite tighter thresholds for eligibility, including newly adopted restrictions on annual income, and the imposition of prepayment penalties, the newly implemented program is expected to be substantively similar to the mortgage refinancing program implemented in 2015. Similar to the 2015 program, banks holding newly converted fixed rate loans will be required to sell such loans to Korea Housing Finance Corporation, which will then securitize such loans and issue mortgage-backed securities (backed by such loans) to be purchased by the banks who sold the loans in proportion to the amounts of the loans sold. The amount of loans the Bank will need to transfer to the Korea Housing Finance Corporation is ₩1.7 trillion, but the amount of mortgage-backed securities the Bank will need to purchase from Korea Housing Finance Corporation has yet to be determined. Similar to the 2015 program, in the event that market interest rates increase from those applicable during this program's implementation, the Bank may experience valuation or realization losses on the mortgage-backed securities to be held by the Bank. Further, the Bank will be required to hold mortgage-backed securities it purchases from Korea Housing Finance Corporation under the program for a period of one year, and the Bank also may not be able to sell or otherwise dispose of the mortgage backed securities in the market or otherwise in amounts or at prices commercially reasonable due to the prevailing interest rate environment and/or other market conditions. As a result of this program the Bank may incur additional costs from recalibrating its asset portfolio and asset-liability management policy. Any of these developments could adversely affect the Bank's results of operation and financial condition.

The Bank, on a voluntary basis, may factor the existence of the Government's policies and encouragements into consideration in making loans although the ultimate decision whether to make loans remains with the Bank and is made based on its internal credit approval procedures and risk management systems independently of Government policies. In addition, in tandem with providing additional loans to small- and medium-sized enterprises and low-income individuals, the Bank takes active steps to mitigate the potential adverse impacts from making bad loans to enterprises or individuals with high risk profiles as a result of such arrangement, such as by strengthening its loan review and post-lending monitoring processes. However, the Bank cannot assure you that such arrangement did not or will not, or similar or other government-led initiatives in the future will not, result in a suboptimal allocation of the Bank's loan portfolio from a risk-reward perspective compared to what the Bank would have allocated based on purely commercial decisions in the absence of such initiatives. The Government may implement similar or other initiatives in the future to spur the overall economy or encourage the growth of targeted industries or relief to certain segments of the population. Specifically, the Government may introduce lending-related initiatives or enforce existing ones in a heightened fashion during times when small- and medium-sized enterprises or low-income households on average are facing an increased level of financial distress or vulnerability due to an economic downturn, which makes lending to them in the volume and the manner suggested by the Government even riskier and less commercially desirable. Accordingly, such policy-driven lending may create enhanced difficulties for the Bank in terms of risk management, deterioration of its asset quality and reduced earnings, compared to what would have been in the absence of such initiatives, which may have an adverse effect on its business, financial condition and results of operations.

The Government may also encourage investments in certain institutions in furtherance of policy objectives, and the Bank may not recoup its investments therein in a timely or otherwise commercially reasonable manner.

In addition to targeted lending, the Government may from time to time encourage or request the financial institutions in Korea, including the Bank and its subsidiaries, to make investments in, or provide other forms of financial support to, certain institutions in furtherance of the Government's policy objectives. In response thereto, the Bank has made and will continue to make the ultimate decision on whether, how and to what extent it will comply with such encouragements or requests based on its internal risk assessment and in accordance with its risk management systems and policies. At the same time, as a leading member of the financial service industry in Korea and as a responsible corporate citizen the Bank will also fully give due consideration to such encouragements or requests from the Government, especially in relation to the long-term benefit arising from furthering the policy objective of maintaining a sound financial system, even if complying with such requests may involve additional short-term costs and risks to a limited extent.

For example, to deal with a growing number of non-performing loans in the wake of the global financial crisis of 2008-2009, the Government sponsored the establishment of United Asset Management Company Ltd. ("**UAMCO**") in October 2009 through capital contributions from six major policy and commercial banks, namely the Bank, Kookmin Bank, KEB Hana Bank, Industrial Bank of Korea, Woori Bank and Nonghyup Bank. The Government originally planned to dispose of UAMCO during 2015 and establish a new company that specializes in corporate restructuring, but the Government scrapped such plans and instead decided to reorganize UAMCO and expand its restructuring business. As part of an effort to strengthen its balance sheet, UAMCO received additional capital contributions in May 2016 from two new shareholders, Korea Development Bank and the Export-Import Bank of Korea, and two of its existing shareholders, Woori Bank and Nonghyup Bank. The Bank has committed to contribute ₩175 billion of capital to UAMCO, of which ₩85.1 billion has been contributed to date. As of the date of this offering circular, the Bank holds a 14% equity interest in UAMCO, while seven other policy and commercial banks each hold interests ranging from 2% to 14%.

UAMCO seeks to achieve financial improvement of struggling companies through a wide range of restructuring programs, including debt restructuring, capital injection, asset sales, corporate reorganization, workouts and liquidation and bankruptcy proceedings and is the largest purchaser in Korea of non-performing financial assets generally. The Bank sold non-performing assets to UAMCO in the amount of ₩118.2 billion, ₩131.7 billion and ₩110.4 billion in 2017, 2018 and 2019, respectively. With an enlarged capital base following the recent capital contributions mentioned above, it is expected that UAMCO will play a more active role in the restructuring of the Korean corporate sector. The Government is also considering an amendment of the FSCMA to facilitate the business activities of UAMCO.

If UAMCO is successful in its expanded restructuring activities, it is anticipated that financial institutions including the Bank will be able to further enhance their financial soundness by transferring more non-performing loans to UAMCO rather than directly engaging in the restructuring activities of the troubled borrowers. However, the Bank or other banks may be requested by the Government to make additional capital contributions or loans to UAMCO, which may entail unanticipated costs. Additionally, given the generally poor quality of its non-performing assets, there is no assurance that the Bank will be able to sell such assets held by it to UAMCO on commercially reasonable terms and on a timely basis. Furthermore, there is no assurance that in furtherance of similar or other policy objectives, the Government may not request or otherwise encourage the Bank to provide similar or other investments or provide other financial support for which it is not duly compensated or otherwise take up additional risk that it would not normally have undertaken, which may have an adverse effect on its business, financial condition and results of operations.

The level and scope of government oversight of the Bank's retail lending business, particularly regarding mortgage and home equity loans, may change depending on the economic or political climate.

Real estate comprises the most significant asset for a substantial number of households in Korea, and movements of housing prices have generally had a significant impact on the domestic economy. Accordingly, regulating housing prices, either in terms of attempting to stem actual or anticipated excessive speculation during times of a suspected housing price bubble and spur the pricing and/or volume of real estate transactions during times of a depressed real estate market by way of tax subsidy, guidelines to lending institutions or otherwise, has been a key policy initiative for the Government.

For example, during the early to mid-2000s, the Government adopted several regulatory measures, including in relation to retail banking, to stem a rise in speculation in real estate investments generally and in select areas. Some of the measures undertaken in the past include requiring financial institutions to impose stricter debt-to-income ratio and loan-to-value ratio requirements for mortgage loans for real property located in areas deemed to have engaged in a high level of speculation, raising property tax on real estate transactions for owners of multiple residential units, adopting a ceiling on the sale price of newly constructed housing units and recommending that commercial banks restrain from making further mortgage and home equity lending, among others. In addition, amid a prolonged slump in the housing market in Korea, in April 2013, the Government announced a real estate comprehensive countermeasure, which provides, among other things, for (i) reduced capital gains tax and (ii) exemption of acquisition tax for first-time homebuyers. In addition, in November 2013, the Government announced a permanent reduction in acquisition tax, with retrospective application from August 2013. Prior to such reduction, acquisition tax was assessed on a differentiated scale based on whether the homebuyer was purchasing a primary home or a secondary home, with the former being assessed an acquisition tax of 2% for the purchase of homes under ₩900 million and 4% for homes exceeding ₩900 million, and the latter being assessed an acquisition tax of 4% regardless of the price of the home. Under the new regulatory structure, the differentiated tax scale for primary homes and secondary homes is eliminated, and all homebuyers are assessed an acquisition tax of 1% for the purchase of homes under ₩600 million, 2% for homes exceeding ₩600 million but less than ₩900 million and 3% for homes exceeding ₩900 million Furthermore, in February 2014, the FSC announced plans to increase the proportion of fixed interest rate loans and installment principal repayment-based loans within the total housing loans extended by commercial banks. See "*— The Government may encourage targeted lending to certain sectors in furtherance of policy objectives, and the Bank may take this factor into account*."

In addition, in order to rationalize the regulations on the housing loans, the FSC and the FSS provided administrative instructions in July 2014 with effect from August 1, 2014, which have been extended and amended several times, that all financial institutions including banks under the Banking Act were subject to the maximum loan-to-value ratio of 70% (irrespective of the location of the property, subject to certain exceptions) and the maximum debt-to-income ratio of 60% (only in respect of apartment units located in the greater Seoul metropolitan area, subject to certain exceptions). The above administrative instructions have been replaced by the Regulation on the Supervision of the Banking Business and the Detailed Regulation on the Supervision of the Banking Business reflecting the tightened measures as discussed below. Furthermore, in December 2014, the National Assembly also passed several bills that were designed to stimulate the real estate market. In November 2016, amid concerns about increasing household debt, the Government announced another real estate comprehensive countermeasure requiring property buyers in Seoul to retain ownership for a longer period of time and increasing down payments to be made on the property. In January 2017, in order to modernize credit review methods and stabilize the management of household debt, the FSC announced the planned introduction of a debt service ratio and a new debt-to-income ratio. The new debt-to-income ratio, which has been implemented beginning January 31, 2018 reflects (i) both principal and interest payments on the applicable mortgage and home equity loan and existing mortgage and home equity loans and (ii) interest payments on other loans. Previously, debt-to-income ratio had only reflected (i) both principal and interest payments on the applicable mortgage and home equity loan and (ii) interest payments on existing mortgage and home equity loans. Debt service ratios reflect principal and interest payments on both the applicable loan and other loans and have been fully implemented since October 2018. The new debt-to-income ratios are used as the primary reference index in the evaluation and approval process for mortgage and home equity loans, and debt service ratios are generally used as a supplementary reference index providing additional limits on mortgage and home equity loans. Since October 2018, loans to rental businesses are subject to a rent-to-interest ratio (calculated as the borrower's aggregate annual rental income from rental properties over its aggregate annual payment amount of interest on loans secured by such rental properties) of at least 1.25 for residential rental businesses and at least 1.50 for non-residential rental businesses.

Since June 2017, the Government led by President Moon Jae-in has announced and implemented a series of robust polices aimed at taming speculation and deterring the rise of housing prices including, among others, the designation of "speculative districts" (comprised of fifteen districts in Seoul and Sejong Special Self-Governing City as of February 21, 2020), "overheated speculative districts" (comprised of Seoul, Gwacheon City, Bundang District in Seongnam City, Gwangmyeong City, Hanam City respectively in Gyeonggi Province, Suseong District in Daegu Metropolitan City and Sejong Special Self-Governing City as of February 21, 2020) and "adjustment targeted areas" (comprised of Seoul, 25 cities, districts or other areas in Gyeonggi Province and Sejong Special Self-Governing City as of February 21, 2020) (the "speculative districts", "overheated speculative districts" and "adjustment targeted areas" are hereinafter referred to as the "regulated areas"), and the application of reduced loan-to-value ratios and debt-to-income ratios to those buying homes in the regulated areas.

For example, recently, on December 16, 2019, the Government unveiled a tighter set of measures aimed at the housing market. According to these new measures, which became effective from December 17, 2019, no mortgage or home equity loans can be provided to purchase a new home located in any of the regulated areas to a household that already owns two or more housing units. For a household that already owns one housing unit, such loans can only be provided under very limited circumstances. Furthermore, the "speculative districts" and "overheated speculative districts" are further restricted by tighter loan-to-value ratios. If the market value of a home located in any of the "speculative districts" or "overheated speculative districts" being acquired is greater than ₩1.5 billion, no mortgage or home equity loans may be provided. For homes located in any of the "speculative districts" or "overheated speculative districts" with a market value equal or less than ₩1.5 billion but greater than ₩900 million, the loans can only cover 40% of the market value up to ₩900 million and 20% of any remaining value between ₩1.5 billion and ₩900 million. In addition to the foregoing restrictions, no mortgage loan applicant buying a home in any of the "speculative districts" or "overheated speculative districts" may incur a loan that will exceed 40% of his/her debt service ratio for homes with market values exceeding ₩900 million. Furthermore, on February 20, 2020, the Government announced additional countermeasures to curb housing prices in the "adjustment targeted areas", under which if the market value of a home located in any of the "adjustment targeted areas" being acquired is greater than ₩900 million, the loans can only cover 50% of the market value up to ₩900 million and 30% of any remaining value exceeding ₩900 million. These renewed measures are expected to lead to a decline in the overall volume of home mortgage loans but may result in an increase in long-term deposit loans required for house rentals and lending to borrowers with high credit profiles.

Pursuant to the Regulation on the Supervision of the Banking Business, the Bank must maintain a loan to deposit ratio of no more than 100%. Currently, in calculating the loan to deposit ratio, there is no differentiation between retail loans and corporate loans. However, the Regulation on the Supervision of the Banking Business was amended on July 12, 2018 to provide that, beginning from January 1, 2020, in calculating such loan to deposit ratio, retail loans and corporate loans are weighed differently, with retail loans subject to a multiple of 115% and corporate loans (excluding loans to SOHOs) subject to a multiple of 85%, thereby increasing the impact of retail loans and reducing the impact of corporate loans in calculating such ratio. Additionally, the Detailed Regulation on the Supervision of the Banking Business was amended on June 30, 2018 to provide for a weighted multiple to be applied to mortgage and home equity loans where the loan-to-value ratio exceeds 60% in determining required minimum total capital (BIS) ratio. Further, the Regulation on the Supervision of the Banking Business is expected to be amended during 2020 such that the countercyclical capital buffer requirement also takes into account the increase of credit in the retail sector. The Detailed Regulation on the Supervision of the Banking Business was also amended on June 30, 2018 to add "concentration of risk in the retail sector" as an additional criterion when the FSS evaluates the risk management systems of Korean banks.

There is no assurance that Government measures will achieve their intended results. While any Government measure that is designed to stimulate growth in the real estate sector may result in growth of, and improved profitability for, the Bank's retail lending business (particularly with respect to mortgage and home equity loans) at least for the short term, such measure could also result in unintended consequences, including potentially excessive speculation resulting in a "bubble" for the Korean real estate market and a subsequent market crash. In contrast, any Government measure changing the direction of its stimulative measures (for example, in order to preemptively curtail an actual or anticipated bubble in the real estate market) may result in a contraction of the real estate market, a decline in real estate prices and consequently, a reduction in the growth of, and profitability for, the Bank's retail and/or other lending businesses, as well as otherwise have an adverse effect on the business, financial condition and results of operations or profitability of the Bank. See "*— Risks Relating to the Bank's Business — A decline in the value of the collateral securing the Bank's loans or the Bank's inability to fully realize the collateral value may adversely affect the Bank's credit portfolio*."

The Bank engages in limited settlement transactions involving Iran which may subject the Bank to legal or reputational risks.

The U.S. Department of the Treasury's Office of Foreign Assets Control ("**OFAC**") administers and enforces certain laws and regulations ("**OFAC Sanctions**") that impose restrictions upon dealings with or related to certain countries, governments, entities and individuals that are the subject of OFAC Sanctions, including Iran, and maintains a list of specially designated nationals (the "**SDN List**"), whose assets are blocked and with whom U.S. persons are generally prohibited from dealing. Some OFAC Sanctions require a U.S. nexus in order to apply ("**Primary Sanctions**") while other OFAC Sanctions on certain dealings with or related to Iran, North Korea, and Russia apply even in the absence of a U.S. nexus ("**Secondary Sanctions**"). Non-U.S. persons are subject to Secondary Sanctions and can also be held liable for violations of Primary Sanctions on various legal grounds, such as causing violations by U.S. persons by engaging in transactions completed in part in the United States. The European Union also enforces certain laws and regulations that impose restrictions upon nationals and entities of, and business conducted in, member states with respect to activities or transactions with certain countries, governments, entities and individuals that are the subject of such laws and regulations. The United Nations Security Council and other governmental entities also impose similar sanctions.

In August 2016, the Government authorized us to act as a settlement bank for Euro-denominated transactions between Korean and Iranian businesses. Prior to the granting of this permission, payments for business activities were settled only in Won and the Bank did not participate in such settlements. From August 2016 through August 2017, the Bank processed 10 such transactions that resulted in a minimal amount of revenue. Since August 2017, the Bank has ceased processing any such transactions and has no intention to process any such transactions in the future. The Bank is committed to engaging only in lawful activities and in obeying all relevant OFAC Sanctions and European Union sanctions but cannot guarantee that actions taken by its employees will not violate such sanctions. On May 8, 2018, U.S. President Donald Trump announced his decision to terminate the participation of the United States in the Joint Comprehensive Plan of Action (the "**JCPOA**"), pursuant to which certain relief of OFAC Sanctions relating to Iran had been provided. Following two wind down periods, one that ended on August 6, 2018 and one that ended on November 4, 2018, all Iran-related Secondary Sanctions that had been waived pursuant to the JCPOA were re-imposed and non-U.S. persons now face risk of Secondary Sanctions for dealing with certain key sectors of the Iranian economy or for providing associated services related to the targeted activities As such, any Iran-related activities may subject the Bank to OFAC Sanctions and to potential legal or reputational risks.

The Bank is generally subject to Korean accounting, regulatory, corporate governance and disclosure standards, which differ from those applicable to banks in other countries.

Banks in Korea, including the Bank, are subject to Korean accounting standards and disclosure requirements, which differ in significant respects from those applicable to banks in certain other countries, including the United States. The Bank's financial statements are prepared in accordance with K-IFRS, which may differ in certain respects from IFRS applied in other countries. In addition, the Bank is subject to corporate governance standards applicable to Korean banks, which differ in many respects from standards applicable in other countries. There may also be less publicly available information about Korean banks, such as the Bank, than is regularly made available by public or non-public companies in other countries. Such differences in accounting and corporate governance standards as well as less available public information could result in less than satisfactory corporate governance practices or disclosure to investors.

You may not be able to enforce a judgment of a foreign court against the Bank.

The Bank is a corporation with limited liability organized under the laws of Korea. All or substantially all of the Bank's directors and officers and other persons named in this offering circular reside in Korea, and all or a substantial portion of the assets of the Bank's directors and officers and other persons named in this offering circular and substantially all of its assets are located in Korea. As a result, it may not be possible for investors to effect service of process within the United States, or to enforce against them or the Bank in the United States judgments obtained in United States courts based on the civil liability provisions of the federal securities laws of the United States. There is doubt as to the enforceability in Korea, either in original actions or in actions for enforcement of judgments of United States courts, of civil liabilities predicated on the United States federal securities laws.

Risks Relating to Korea

Unfavorable financial and economic conditions in Korea and globally may have a material adverse impact on the Bank's asset quality, liquidity and financial performance.

The Bank is incorporated in Korea, where most of its assets are located and most of its income is generated. As a result, the Bank is subject to political, economic, legal and regulatory risks specific to Korea, and its business, results of operations and financial condition are substantially dependent on developments relating to the Korean economy. As Korea's economy is highly dependent on the health and direction of the global economy, and investors' reactions to developments in one country can have adverse effects on the securities price of companies in other countries, the Bank is also subject to the fluctuations of the global economy and financial markets. Factors that determine economic and business cycles in the Korean or global economy are for the most part beyond the Bank's control and inherently uncertain. In addition to discussions of recent developments regarding the global economic and market uncertainties and the risks relating to the Bank as provided elsewhere in this section, factors that could have an adverse impact on Korea's economy in the future include, among others:

- continued volatility or deterioration in Korea's credit and capital markets;
- difficulties in the financial sectors in Europe, China and elsewhere and increased sovereign default risks in select countries and the resulting adverse effects on the global financial markets;
- declines in consumer confidence and a slowdown in consumer spending and corporate investments;
- adverse changes or volatility in foreign currency reserve levels, commodity prices (including oil prices), exchange rates (including fluctuation of the U.S. dollar, the Euro or the Yen exchange rates or revaluation of the Chinese Renminbi and the overall impact of the United Kingdom's exit from the European Union on January 31, 2020 ("**Brexit**") on the value of the Won), interest rates, inflation rates or stock markets;
- increasing levels of household debt;
- increasing delinquencies and credit defaults by retail and small- and medium-sized enterprise borrowers;
- continuing adverse conditions in the economies of countries and regions that are important export markets for Korea, such as the United States, Europe, Japan and China, or in emerging market economies in Asia or elsewhere, as well as increased uncertainty in the wake of Brexit;
- the economic impact of any pending or future free trade agreements;
- potential escalation of the ongoing trade war between the U.S. and China as each country introduces tariffs on goods traded with the other;
- social and labor unrest;
- decreases in the market prices of Korean real estate;
- a decrease in tax revenue and a substantial increase in the Government's expenditure for fiscal stimulus measures, unemployment compensation and other economic and social programs that together, would lead to an increased government budget deficit;
- financial problems or lack of progress in the restructuring of Korean business groups, other large troubled companies, their suppliers or the financial sector;

- loss of investor confidence arising from corporate accounting irregularities and corporate governance issues concerning certain Korean business groups;

- increases in social expenditures to support an aging population in Korea or decreases in economic productivity due to the declining population size in Korea;

- geopolitical uncertainty and risk of further attacks by terrorist groups around the world, including the actions of the so-called "Islamic State";

- the occurrence of severe health epidemics in Korea and other parts of the world, including the recent coronavirus (COVID-19), Ebola, Middle East Respiratory Syndrome (MERS) and Zika virus outbreaks;

- deterioration in economic or diplomatic relations between Korea and its trading partners or allies, including deterioration resulting from territorial or trade disputes or disagreements in foreign policy such as the recent diplomatic tension between Korea and China with respect to the deployment of the Terminal High Altitude Area Defense (THAAD) system in Korea and trade disputes between Korea and the United States with respect to the imposition of anti-dumping duties on Korean steel, washing machines, transformers and solar panels;

- political uncertainty, or increasing strife among or within political parties in Korea, and political gridlock within the government or in the legislature, which prevents or disrupts timely and effective policy making;

- hostilities or political or social tensions involving oil-producing countries in the Middle East and North Africa and any material disruption in the global supply of oil or sudden increase in the price of oil;

- political or social tensions involving Russia and any resulting adverse effects on the global supply of oil or the global financial markets;

- the occurrence of natural or man-made disasters in Korea (such as the sinking of the Sewol ferry in April 2014, which significantly dampened consumer sentiment in Korea for months) and other parts of the world, particularly in trading partners of Korea; and

- an increase in the level of tensions or an outbreak of hostilities between North Korea and Korea or the United States.

Any future deterioration of the Korean economy could have an adverse effect on the Bank's business, financial condition and results of operations.

Tensions with North Korea could have an adverse effect on the Bank and the price of the Notes.

Relations between Korea and North Korea have been tense throughout Korea's modern history. The level of tension between Korea and North Korea has fluctuated and may increase abruptly as a result of current and future events. In particular, there continues to be heightened security tension in the region stemming from North Korea's hostile military and diplomatic actions, including in respect of its nuclear weapons and long-range missile programs. Some examples from recent years include the following:

- North Korea renounced its obligations under the Nuclear Non-Proliferation Treaty in January 2003 and conducted six rounds of nuclear tests since October 2006, including claimed detonations of hydrogen bombs, which are more powerful than plutonium bombs, and warheads that can be mounted on ballistic missiles. Over the years, North Korea has also conducted a series of ballistic missile tests, including missiles launched from submarines and intercontinental ballistic missiles that it claims can reach the United States mainland. In response, the Government has repeatedly condemned the provocations and flagrant violations of relevant United Nations Security Council resolutions. Internationally, the United Nations Security Council has passed a series of resolutions condemning North Korea's actions and significantly expanding the scope of sanctions applicable to North Korea, most recently in December 2017 in response to North Korea's intercontinental ballistic missile test in November 2017. Over the years, the United States and the European Union have also expanded their sanctions applicable to North Korea.

- In August 2015, two Korean soldiers were injured in a landmine explosion while on routine patrol of the southern side of the demilitarized zone. Claiming the landmines were set by North Koreans, the Korean army re-initiated its propaganda program toward North Korea utilizing loudspeakers near the demilitarized zone. In retaliation, the North Korean army fired artillery rounds on the loudspeakers, resulting in the highest level of military readiness for both sides. High-ranking officials from North Korea and Korea subsequently met for discussions intending to diffuse military tensions and released a joint statement whereby, among other things, North Korea expressed regret over the landmine explosions that wounded the Korean soldiers.

- In February 2016, in retaliation of North Korea's launch of a long-range rocket, Korea announced that it would halt its operations of the Kaesong Industrial Complex, an industrial complex in the border city of Kaesong, to impede North Korea's utilization of funds from the industrial complex to finance its nuclear and missile programs. In response, North Korea announced that it would expel all Korean employees from the industrial complex and freeze all Korean assets in the complex. All 280 Korean workers present at Kaesong left hours after the announcement by North Korea, and the complex remains closed as of the date of this offering circular.

- In March 2013, North Korea stated that it had entered "a state of war" with Korea, declaring the 1953 armistice invalid, and put its artillery at the highest level of combat readiness to protest the Korea-United States allies' military drills and additional sanctions imposed on North Korea for its missile and nuclear tests.

North Korea's economy also faces severe challenges, including severe inflation and food shortages, which may further aggravate social and political tensions within North Korea. In addition, reunification of Korea and North Korea could occur in the future, which would entail significant economic commitment and expenditure by Korea that may outweigh any resulting economic benefits of reunification.

In April, May and September 2018, President Moon Jae-in met Kim Jong-un in a series of summit meetings to discuss, among other matters, denuclearization of the Korean peninsula. In June 2018, U.S. President Donald Trump and Kim Jong-un in turn had an official summit in Singapore, the first ever meeting between leaders of the United States and North Korea. Subsequent to the Singapore summit, they signed a joint statement, which stated, among others, new peaceful relations and the denuclearization of the Korean peninsula. A second official summit between U.S. President Donald Trump and Kim Jong-un was held in Vietnam in February 2019 but ended abruptly and without an agreement. In June 2019, U.S. President Donald Trump and Kim Jong-un had another summit at the Korean Demilitarized Zone, following which both sides announced a resumption of denuclearization talks. However, in December 2019, North Korea announced its intention to resume missile testing, heightening tensions.

In the aftermath of these developments, there remains significant uncertainty regarding peace talks and the denuclearization of the Korean peninsula. As such, there can be no assurance that the level of tension on the

Korean peninsula will not escalate in the future or that the political regime in North Korea may not suddenly collapse. Any further increase in tension or uncertainty relating to the military, political or economic stability in the Korean peninsula, including a breakdown of diplomatic negotiations over the North Korean nuclear program, occurrence of military hostilities, heightened concerns about the stability of North Korea's political leadership or its actual collapse, a leadership crisis, a breakdown of high-level contacts or accelerated reunification could have a material adverse effect on the Bank's business, financial condition and results of operations, as well as a downgrade in the credit rating of Korea, the Bank or the Notes.

Risks Relating to the Notes

Capitalized terms used but not defined in this section shall have the meanings given to them in the "Terms and Conditions of the Notes."

The Notes issued under the Program may have limited liquidity.

The Notes when issued may constitute a new issue of securities for which there will be no existing trading market. Although the Dealers may make a market in the Notes, they are not obligated to do so, and any market-making activity with respect to the Notes, if commenced, may be discontinued at any time without notice. No assurance can be given as to the liquidity of, or the development and continuation of an active trading market for, the Notes. If an active trading market for the Notes does not develop or is not maintained, the liquidity and market price of the Notes may be adversely affected. If such a market were to develop, the Notes could trade at prices that may be higher or lower than the price at which the Notes are issued depending on many factors, including, among others:

- prevailing interest rates;
- the Bank's results of operations, financial condition and prospects;
- the rate of exchange between Won and the currency of the Notes;
- political and economic developments in and affecting Korea and other regions;
- the financial condition and stability of the Korean financial and other sectors; and
- the market conditions for similar securities.

The Notes are unsecured obligations, the repayment of which may be jeopardized in certain circumstances.

Because the Notes are unsecured obligations, their repayment may be compromised if:

- the Bank enters into bankruptcy, liquidation, reorganization or other winding-up procedures;
- there is a default in payment under the Bank's future secured indebtedness or other unsecured indebtedness; or
- there is an acceleration of any of the Bank's indebtedness.

If any of these events occurs, the Bank's assets may not be sufficient to pay amounts due on any of the Notes.

The Notes that are Subordinated Notes are subordinated and have only limited rights of acceleration.

The relevant Pricing Supplement may specify that the Notes will be Subordinated Notes, which will be subordinated obligations of the Bank. Payments on the Subordinated Notes will be subordinate in right of payment upon the occurrence of a Subordination Event to the prior payment in full of all deposits and other liabilities of the Bank, except those liabilities which rank equally with or junior to the Subordinated Notes. As a consequence of these subordination provisions, if any of such events should occur, the holders of the Subordinated Notes may recover proportionately less than the holders of the Bank's deposit liabilities or the holders of its other unsubordinated liabilities. As of December 31, 2019, all of the Bank's outstanding liabilities (including deposits, borrowings, call money, guarantees and acceptances and other liabilities, but excluding provisions) would rank senior to the Subordinated Notes, except for subordinated debt of ₩3,200 billion and US$2.43 billion which would rank *pari passu* with the Subordinated Notes.

Only those events described herein regarding the Bank's bankruptcy or liquidation will permit a holder of a Subordinated Note to accelerate payment of such Subordinated Notes. In such event, the only action the holder may take in Korea against the Bank is to make a claim in the Bank's liquidation or other applicable proceeding. Furthermore, if the Bank's indebtedness were to be accelerated, its assets may be insufficient to repay in full borrowings under all such debt instruments, including the Notes.

The Notes that are Subordinated Notes may be fully written off upon the occurrence of certain trigger events, in which case holders of the Notes will lose all of their investment.

The Subordinated Notes will be subject to loss absorption provisions pursuant to which the Bank will irrevocably effect a full write-off of the outstanding principal amount and accrued but unpaid interest on the Subordinated Notes (without the need for the consent of the holders) upon the occurrence of certain trigger event tied to the performance and viability of the Bank. A trigger event would be the designation of the Bank as an "insolvent financial institution" pursuant to the Act on Structural Improvement of the Financial Industry of Korea. Such write-off will be in effect on the third business day in Korea from the occurrence of such trigger event.

Under Article 2 of the Act on Structural Improvement of the Financial Industry, an "insolvent financial institution" is defined as a financial institution that is:

- determined by the FSC or the Deposit Insurance Committee (the "**DIC**") established within the Korea Deposit Insurance Corporation (the "**KDIC**"), based on an actual survey of such financial institution's business operations as (i) having liabilities that exceed its assets (each as valued and calculated in accordance with standards established by the FSC), or (ii) facing apparent difficulty in its normal operations because its liabilities exceed its assets (each as valued and calculated in accordance with standards established by the FSC) as a result of the occurrence of a major financial scandal or the accrual of non-performing loans;

- subject to a suspension of payment of claims (including deposits) or repayment of money borrowed from other financial institutions; or

- determined by the FSC or the DIC to be unable to make payments of claims (including deposits) or repayments of money borrowed, without external support or additional borrowings (other than borrowings accruing from ordinary course financial transactions).

In the event that the Subordinated Notes are written off, such written-off amount will be irrevocably lost and holders of the Subordinated Notes will cease to have any claims for any principal amount and accrued but unpaid interest on the Subordinated Notes. See "*Terms and Conditions of the Notes — Loss Absorption upon a Trigger Event in respect of Subordinated Notes*."

Potential investors should consider the risk that, due to the existence of such loss absorption features, a holder of Subordinated Notes may lose all of its investment in such Subordinated Notes in the event that a trigger event occurs.

The applicable Korean laws and regulations relating to the trigger events and loss absorption features of Tier II capital instruments like the Subordinated Notes are relatively new and have yet to be tested. There is considerable uncertainty as to the circumstances under which the relevant Korean regulatory authorities will decide to effect a trigger event with respect to a particular financial institution. The occurrence of a trigger event with respect to the Bank is therefore inherently unpredictable and is subject to factors that are outside the control of the Bank, which will make it difficult for investors to anticipate when, if at all, a write-off of the Subordinated Notes will take place. Accordingly, the trading behavior with respect to the Subordinated Notes may not follow trading behavior associated with other types of securities of the Bank or other issuers. Any indication that the Bank is trending towards a possible trigger event could have a material adverse effect on the market price of the Subordinated Notes. A potential investor should not invest in the Subordinated Notes unless it has knowledge and expertise to evaluate how the Subordinated Notes will perform under changing market conditions and the resulting effect on the likelihood of a write-down and on the market value of the Notes.

Under Article 37 of the Depositor Protection Act, any entity which intends to acquire, merge with, acquire the business of or succeed the rights and obligations under the financial transactions of "insolvent or similar financial institution" (including an "insolvency-threatened financial institution") or a financial holding company which has such financial institution as its subsidiary or its second- or third-tier subsidiary under the Financial Holding Companies Act may apply to the KDIC for the financial assistance, and under Article 38 of the Depositor Protection Act, the KDIC (upon a resolution by the DIC) may provide financial assistance to an insured financial institution (such as the Bank) that becomes an insolvent or similar financial institution or a financial holding company which has such financial institution as its subsidiary or its second- or third-tier subsidiary under the Financial Holding Companies Act, where there exists an application for financial assistance under Article 37 of the Depositor Protection Act, or where it is deemed necessary for making acquisition of, merger with, acquisition the business of or succession of the rights and obligations under the financial transactions of such institution smoothly or where the improvement of the financial structure of such institution is deemed necessary for the protection of depositors and the preservation of order in credit transactions. An "insolvency-threatened financial institution" is defined under Article 2 of the Depositor Protection Act as a financial institution determined by the DIC as having a high possibility of becoming an insolvent financial institution due to its weak financial standing. The financial assistance to be provided can take the form of a loan or deposit of funds, a purchase of assets, a guarantee or assumption of obligations and an equity injection or contribution.

In addition, under Article 8 of the Act on Structural Improvement of the Financial Industry, if the financial institution which is in financial trouble but not yet designated as the insolvent financial institution voluntarily merges with another financial institution for the improvement of its financial structure, the Government may provide financial assistance to the merged financial institution through: (i) the KDIC, (ii) the purchase by the Government's Public Capital Management Fund of certain securities held or issued by the merged financial institution (such as bonds issued by the Government or local governments or bonds guaranteed by the Government or subordinated notes issued by the merged financial institution), and (iii) a capital injection by the Government of state-owned assets into the merged financial institution.

In light of the size and scale of the Bank and its relative importance to the Korean banking system, it is possible that, prior to the occurrence of a trigger event that leads to a write-off of the Subordinated Notes, the Bank will be classified as an insolvency-threatened financial institution and receive some form of financial assistance from the KDIC, or that the Government will decide to provide other forms of financial assistance or capital support to the Bank. However, since the provision of any such financial assistance or capital support would be at the discretion of the KDIC or the Government, as applicable, there is no guarantee that the Bank will receive any financial assistance or capital support prior to the occurrence of a trigger event or that any such financial assistance or capital support received by the Bank will be sufficient to prevent the occurrence of a trigger event leading to a write-off of the Subordinated Notes.

Pursuant to Condition 9 of the Terms and Conditions of the Notes, the Bank will issue a Trigger Event Notice not more than two Korean Business Days after the occurrence of a Trigger Event, confirming that a Trigger Event has occurred. Although the Bank will notify the Principal Paying Agent and the holders of the Subordinated Notes not more than two Korean Business Days after the occurrence of a Trigger Event, there may be a delay between a Trigger Event and the time that the clearing systems and the holders of the Subordinated Notes are notified of the occurrence of the relevant Trigger Event. Such delay may exceed several days during which trading and settlement in the Subordinated Notes may continue. Any such delay will not change or delay the effect of a Trigger Event or the Bank's obligations under the Subordinated Notes or the rights of the Subordinated Noteholders.

The clearing systems are expected to suspend all clearance and settlement of transfers of the Subordinated Notes by the Subordinated Noteholders following receipt of a Trigger Event Notice, and any transfer of Subordinated Notes which are scheduled to settle after commencement of such suspension is expected to be rejected by clearing systems and will not be settled within the clearing systems.

It is possible that transfers that are initiated prior to any suspension following receipt by the clearing systems of a Trigger Event Notice and scheduled to settle on a date before the clearing systems commence such suspension will be settled through the clearing system even though such transfers were initiated after the Trigger Event. In such circumstances, transferees of the Subordinated Notes may be required to pay consideration through the clearing systems even though, upon the occurrence of a Trigger Event, no amounts under the Subordinated Notes will thereafter become due, and such transferees will have no rights whatsoever under the Conditions or the Subordinated Notes to take any action or enforce any rights whatsoever against the Bank. The settlement of the Subordinated Notes following a Trigger Event will be subject to procedures of the clearing system for the time being in effect.

The Agency Agreement contains certain protections and disclaimers as applicable to the Agents in relation to Condition 9 of the Terms and Conditions of the Notes. Each holder of Subordinated Notes are deemed to have authorized, directed and requested the taking of any and all necessary action to give effect to any loss absorption feature and any Write-off following the occurrence of the Trigger Event.

The Notes are subject to transfer restrictions.

The Notes will not be registered under the Securities Act or any state securities laws and may not be offered or sold within the United States, except to QIBs in reliance on the exemption provided by Rule 144A, to certain persons in offshore transactions in reliance on Regulation S, or, if available, pursuant to another exemption from, or in another transaction not subject to, the registration requirements of the Securities Act and, in each case, in accordance with applicable state securities laws. In addition, subject to the conditions set forth in the Notes and the Agency Agreement or otherwise specified in the applicable Pricing Supplement, a Note may be transferred only if the principal amount of Notes transferred is at least US$200,000. For a further discussion of the transfer restrictions applicable to the Notes, see "*Subscription and Sale and Transfer and Selling Restrictions*."

Any future discontinuation of LIBOR and the application of a successor or alternative benchmark reference rate may adversely affect the value of and return on the Notes that are Floating Rate Notes.

In the case of the Notes that are Floating Rate Notes, LIBOR may be the benchmark reference rate used to calculate the rate of interest applicable to such Notes ("LIBOR-based Floating Rate Notes") for each interest period. LIBOR for different periods and currencies is determined and announced on a daily basis by the ICE Benchmark Administration, the administrator of LIBOR, based on rate submissions provided by groups of panel banks for the relevant currencies. In July 2017, the U.K. Financial Conduct Authority, which has regulatory authority with respect to LIBOR, announced that it does not intend to continue to encourage, or use its power to compel, panel banks to provide rate submissions for the determination of LIBOR beyond the end of 2021. It is possible that panel banks will continue to provide rate submissions, and that the ICE Benchmark Administration will continue to determine and announce LIBOR, on the current basis after 2021, if they are willing and able to do so. However, there is no guarantee that LIBOR will be determined and announced after 2021 on the current basis, or at all.

Upon the occurrence of a Benchmark Transition Event (as defined in Condition 6(b)(vii) of the Terms and Conditions of the Notes) with respect to LIBOR, including a public statement or publication of information by or on behalf of the U.K. Financial Conduct Authority or the ICE Benchmark Administration announcing that the latter has ceased or will cease to provide LIBOR permanently or indefinitely, the Benchmark Replacement (as defined in Condition 6(b)(vii) of the Terms and Conditions of the Notes) as determined by the Bank or its designee will replace LIBOR for all purposes relating to outstanding LIBOR-based Floating Rate Notes. Among other alternatives, the Secured Overnight Financing Rate ("SOFR"), which has been identified by the Alternative Reference Rates Committee convened by the Board of Governors of the U.S. Federal Reserve System and the Federal Reserve Bank of New York as the preferred alternative benchmark reference rate for LIBOR, together with any necessary spread adjustment, may be determined as the Benchmark Replacement to be used to calculate the rate of interest applicable to outstanding LIBOR-based Floating Rate Notes. Any such Benchmark Replacement determined by the Bank or its designee will, in the absence of manifest error, be conclusive and binding on the applicable Noteholders. See "Terms and Conditions of the Notes – Interest – Effect of Benchmark Transition Event." Accordingly, if a Benchmark Transition Event occurs with respect to LIBOR prior to the maturity of any LIBOR-based Floating Rate Notes, the method of calculation and rate of interest payable on such Notes will change. There is no guarantee that any Benchmark Replacement will be similar to, or behave in the same manner as, LIBOR, or that the rate of interest calculated based on any such Benchmark Replacement will not be lower than the rate of interest that would have applied to any LIBOR-based Floating Rate Notes for any interest period if LIBOR had continued to be used as the benchmark reference rate.

Uncertainty regarding the continued availability of LIBOR, as well as the rate of interest that would be applicable to LIBOR-based Floating Rate Notes if LIBOR is discontinued or ceases to be published, may negatively affect the trading market for and trading price of such Notes. Currently, it is not possible to predict future developments with respect to LIBOR or their timing or impact. Any such developments, including as a result of international, national or other initiatives for reform or the adoption of successor or alternative benchmark reference rates in the international debt capital markets, could have a material adverse effect on the value of and return on LIBOR-based Floating Rate Notes and also could have adverse U.S. federal income tax consequences for holders of such Notes.

Risks Relating to the Renminbi Notes

*A description of risks which may be relevant to an investor in Notes denominated in Renminbi ("****Renminbi Notes****") are set out below.*

Renminbi is not freely convertible, and there are significant restrictions on the remittance of Renminbi into and outside the PRC which may adversely affect the liquidity of the Renminbi Notes.

Renminbi is not freely convertible at present. The government of the PRC (the "**PRC Government**") continues to regulate conversion between Renminbi and foreign currencies, including the Hong Kong dollar, despite the significant reduction over the years by the PRC Government of control over trade transactions involving import and export of goods and services as well as other frequent routine foreign exchange transactions. These transactions are known as current account items.

However, remittance of Renminbi by foreign investors into the PRC for the purposes of capital account items, such as capital contributions, is generally only permitted upon obtaining specific approvals from, or completing specific registrations or filings with, the relevant authorities on a case-by-case basis and is subject to a strict monitoring system.

Regulations in the PRC on the remittance of Renminbi into the PRC for settlement of capital account items are developing gradually. In recent years, the People's Bank of China ("**PBoC**") and the Ministry of Commerce of the PRC have issued circulars providing guidance on simplifying certain remittance requirements for settlement of capital account items. However, such circulars are relatively new and are subject to interpretation and application by the relevant authorities in the PRC.

In the event that the Bank decides to remit some or all of the proceeds into the PRC in Renminbi, the Bank's ability to do so will be subject to obtaining all necessary approvals from, and/or registration or filing with, the relevant PRC government authorities. Investors may be required to provide certifications and other information (including Renminbi account information) in order to be allowed to receive payments in Renminbi in accordance with the Renminbi clearing and settlement system for participating banks in Hong Kong, Singapore and Taiwan. However, there is no assurance that the necessary approvals from, and/or registration or filing with, the relevant PRC government authorities will be obtained at all or, if obtained, they will not be revoked or amended in the future.

There is no assurance that the PRC Government will continue to gradually liberalize control over cross-border remittance of Renminbi in the future, that the pilot schemes for Renminbi cross-border utilization will not be discontinued or that new regulations in the PRC will not be promulgated in the future which have the effect of restricting or eliminating the remittance of Renminbi into or outside the PRC. In the event that funds cannot be repatriated outside the PRC in Renminbi, this may affect the overall availability of Renminbi outside the PRC and the Bank's ability to source Renminbi to finance its obligations under Notes denominated in Renminbi.

There is only limited availability of Renminbi outside the PRC, which may affect the liquidity of the Renminbi Notes and the Bank's ability to source Renminbi outside the PRC to service the Renminbi Notes.

As a result of the restrictions by the PRC Government on cross-border Renminbi fund flows, the availability of Renminbi outside the PRC is limited. While the PBoC has entered into settlement agreements on the clearing of Renminbi business with financial institutions in a number of financial centers and cities (the "**Renminbi Clearing Banks**"), including but not limited to Hong Kong and is in the process of establishing Renminbi clearing and settlement mechanisms in several other jurisdictions (the "**Settlement Arrangements**"), the current size of Renminbi-denominated financial assets outside the PRC is limited.

There are restrictions imposed by PBoC on Renminbi business participating banks in respect of cross-border Renminbi settlement, such as those relating to direct transactions with PRC enterprises. Furthermore, Renminbi business participating banks do not have direct Renminbi liquidity support from the PBoC. The Renminbi Clearing Banks only have access to onshore liquidity support from the PBoC for the purpose of squaring open positions of participating banks for limited types of transactions and are not obliged to square for participating banks any open positions resulting from other foreign exchange transactions or conversion services. In such cases, the participating banks will need to source Renminbi from outside the PRC to square such open positions.

Although it is expected that the offshore Renminbi market will continue to grow in depth and size, its growth is subject to many constraints as a result of PRC laws and regulations on foreign exchange. There is no assurance that new PRC regulations will not be promulgated or the settlement arrangements will not be terminated or amended in the future which will have the effect of restricting availability of Renminbi outside the PRC. The limited availability of Renminbi outside the PRC may affect the liquidity of the Renminbi Notes. To the extent the Bank is required to source Renminbi in the offshore market to service the Renminbi Notes, there is no assurance that the Bank will be able to source such Renminbi on satisfactory terms, if at all.

Investment in the Renminbi Notes is subject to exchange rate risks.

The value of Renminbi against the U.S. dollar and other foreign currencies fluctuates from time to time and is affected by changes in the PRC and international political and economic conditions as well as many other factors. The Bank will make all payments of interest and principal with respect to the Renminbi Notes in Renminbi unless otherwise specified. As a result, the value of these Renminbi payments may vary with the changes in the prevailing exchange rates in the marketplace. If the value of Renminbi depreciates against the U.S. dollar or other foreign currencies, the value of the investment made by a holder of the Renminbi Notes in U.S. dollars or any other foreign currency terms will decline.

Payments with respect to the Renminbi Notes may be made only in the manner designated in the Renminbi Notes.

Except in the limited circumstances where the Renminbi is not available for delivery outside the PRC, all payments to investors in respect of the Renminbi Notes will be made solely (i) for so long as the Renminbi Notes are represented by global certificates held with the common depositary or common safekeeper, as the case may be, for Clearstream, Euroclear or the CMU Service, as the case may be, by transfer to a Renminbi bank account maintained in Hong Kong, or (ii) for so long as the Renminbi Notes are in definitive form, by transfer to a Renminbi bank account maintained in Hong Kong in accordance with prevailing rules and regulations of Clearstream, Euroclear or the CMU Service, as the case may be. The Bank cannot be required to make payment by any other means (including in any other currency or by transfer to a bank account in the PRC).

Investment in the Renminbi Notes is subject to interest rate risks.

The PRC government has gradually liberalized its regulation of interest rates in recent years. Further liberalization may increase interest rate volatility. Consequently, the trading price of the Renminbi Notes will vary with the fluctuations in the Renminbi interest rates. If holders of the Renminbi Notes propose to sell their Notes before their maturity, they may receive an offer lower than the amount they have invested.

Gains on the transfer of the Renminbi Notes may be subject to income tax under PRC tax laws.

Under the New Enterprise Income Tax Law and its implementation rules, any gains realized on the transfer of Renminbi Notes by holders who are deemed under the New Enterprise Income Tax Law as non-resident enterprises may be subject to PRC enterprise income tax if such gains are regarded as income derived from sources within the PRC. However, there remains uncertainty as to whether the gains realized from the transfer of the Renminbi Notes would be treated as income derived from sources within the PRC and be subject to PRC tax. This will depend on how the PRC tax authorities interpret, apply or enforce the relevant laws and rules. According to an arrangement between the PRC and Hong Kong, for the avoidance of double taxation, noteholders who are Hong Kong residents, including both enterprise holders and individual holders, will be exempted from PRC income tax on capital gains derived from a sale or exchange of the Renminbi Notes.

Therefore, if a noteholder, being a non-resident enterprise, is required to pay any PRC income tax on gains on the transfer of the Renminbi Notes (such enterprise income tax is currently levied at the rate of 10% of the gross proceeds, unless there is an applicable tax treaty between the PRC and the jurisdiction in which such non-resident enterprise holders of Renminbi Notes reside that reduces or exempts the relevant tax), the value of their investment in the Renminbi Notes may be materially and adversely affected.

Similarly, if a noteholder, as a non-resident individual holder, is required to pay any PRC income tax on gains on the transfer of the Renminbi Notes (such individual income tax is currently levied at the rate of 20% of the gross proceeds, unless there is an applicable tax treaty between the PRC and the jurisdiction in which the relevant non-resident individual holder of the Renminbi Notes resides that reduces or exempts the relevant tax), the value of such noteholder's investment in the Renminbi Notes may be affected.

Investors should contact their own financial, legal, accounting and tax advisers about the risks associated with an investment in the Renminbi Notes, the appropriate tools to analyze that investment, and the suitability of the investment in each investor's particular circumstances. No investor should purchase the Renminbi Notes unless that investor understands and has sufficient financial resources to bear the price, market liquidity, structure and other risks associated with an investment in the Renminbi Notes.

Before entering into any transaction, investors should ensure that they fully understand the potential risks and rewards of that transaction and independently determine that the transaction is appropriate given their objectives, experience, financial and operational resources and other relevant circumstances. Investors should consider consulting with such advisers as they deem necessary to assist them in making these determinations.

CAPITALIZATION AND INDEBTEDNESS

The following table shows the Bank's total liabilities and equity as of December 31, 2019. Except for the U.S. dollar amounts, this information has been derived from the Bank's audited consolidated financial statements as of and for the year ended December 31, 2019 included in this offering circular.

	As of December 31, 2019	
	(in billions of Won)	*(in millions of U.S. dollars)*[1]
Liabilities:		
Deposits	₩287,615	US$248,415
Financial liabilities designated at fair value through profit or loss	508	439
Derivative liabilities	1,894	1,636
Borrowings	17,326	14,964
Debt securities issued	38,030	32,847
Defined benefit liabilities	56	49
Provisions	269	232
Current tax liabilities	399	344
Deferred tax liabilities	30	26
Other liabilities	20,503	17,709
Total liabilities	₩366,630	₩ 316,661
Stockholder's equity:		
Capital stock, par value ₩5,000		
Authorized: 2,000,000,000 shares issued and outstanding: 1,585,615,506 fully paid common shares	₩ 7,928	US$ 6,847
Hybrid bonds	998	862
Capital surplus	403	348
Capital adjustments	(2)	(2)
Accumulated other comprehensive loss	(403)	(348)
Retained earnings	17,163	14,824
Total equity attributable to equity holder of Shinhan Bank	26,087	22,531
Non-controlling interests	6	6
Total stockholder's equity	26,093	22,537
Total liabilities and equity[2]	₩392,723	₩ 339,198

Notes:

(1) The U.S. dollar amounts have been translated into Won at ₩1,157.8 to US$1.00, the Market Exchange Rate as announced by Seoul Money Brokerage Services, Ltd. on December 31, 2019.

(2) Represents the sum of total liabilities and stockholder's equity.

SELECTED FINANCIAL INFORMATION

The following tables set forth the Bank's selected financial data. The selected financial data set forth below as of and for the years ended December 31, 2017, 2018 and 2019 (excluding U.S. dollar amounts) have been derived from the Bank's audited consolidated financial statements as of and for the years ended December 31, 2017, 2018 and 2019 and related notes prepared in accordance with K-IFRS and included elsewhere in this offering circular. The selected financial data set forth below should be read in conjunction with the audited consolidated financial statements and related notes, "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" and other historical financial information included elsewhere in this offering circular.

Beginning on January 1, 2018, the Bank has adopted K-IFRS 1109 'Financial Instruments' which has replaced in entirety previous guidance in K-IFRS 1039. In accordance with the guidance in K-IFRS 1109, an entity that adopts the classification and measurement requirements of this standard need not restate prior periods. If an entity does not restate prior periods, it must recognize any difference between the previous carrying amount and the carrying amount at the beginning of the annual reporting period that includes the date of initial application in the opening retained earnings (or other component of equity, as appropriate) of the annual reporting period that includes the date of initial application. As the restatement of prior periods is not required by K-IFRS 1109, certain of the Issuer's historical financial information as of and for the year ended December 31 2017 is not directly comparable against that of the Issuer's financial information after January 1, 2018. For further information regarding K-IFRS 1109, see "*Risk Factors — Risks Relating to the Bank's Business — The implementation of K-IFRS 1109 with effect from January 1, 2018 renders certain of the Bank's historical financial information as of and for the year ended December 31, 2017 not directly comparable with that of the Bank's financial information after January 1, 2018.*", "*Risk Factors — Risks Relating to the Bank's Business — The implementation of K-IFRS 1109 has caused the Bank to increase its allowance for impairment losses to cover expected credit loss on its loan portfolio and other financial instruments and may increase volatility in the Bank's profit or loss*", "*Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies — Recent Accounting Changes*" and Note 3 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2017 and 2018 included elsewhere in this offering circular.

The audited consolidated financial statements exclude the trust account management business except money trusts for which the Bank provides guarantees as to principal or as to both principal and interest.

Consolidated Financial Information

	For the Year Ended December 31,			
	2017	2018	2019	
	(in billions of Won)			(in millions of U.S. dollars)(1)
Statements of Comprehensive Income Information				
Interest income	₩ 8,123	₩ 9,597	₩10,655	US$ 9,203
Interest expense	(3,131)	(4,011)	(4,783)	(4,131)
Net interest income	4,992	5,586	5,872	5,072
Fees and commission income	1,184	1,258	1,367	1,181
Fees and commission expense	(193)	(221)	(250)	(216)
Net fees and commission income	991	1,037	1,117	965
Dividend income	101	16	15	13
Net gain on financial instruments at fair value through profit or loss	—	359	234	202
Net trading gain (loss)	(165)	—	—	—
Net foreign currency transaction gain	473	142	318	275
Net gain on disposal of financial asset at fair value through other comprehensive income	—	16	108	93
Net gain on sale of available-for-sale financial assets	196	—	—	—
Provision for credit loss allowance	—	(243)	(377)	(326)
Net impairment loss on financial assets	(661)	—	—	—
General and administrative expenses	(3,118)	(3,062)	(3,142)	(2,714)
Other operating expenses, net	(603)	(686)	(882)	(761)
Operation income	2,206	3,165	3,263	2,819
Net non-operating income (expenses)	(48)	(18)	(185)	(160)
Share of profit (loss) of associates	1	(1)	(1)	(1)
Profit before income taxes	2,159	3,146	3,077	2,658
Income tax expense	(447)	(867)	(748)	(646)
Profit for the year	1,712	2,279	2,329	2,012
Items that are or may be reclassified subsequently to profit or loss:				
Foreign currency transaction differences for foreign operations	(186)	21	98	84
Unrealized net change in fair value of financial assets at fair value through other comprehensive income	—	88	117	101
Unrealized net change in fair value of available-for-sale financial assets	(93)	—	—	—
Share of other comprehensive income (loss) of associates	(10)	(2)	3	3
Items that will not be reclassified subsequently to profit or loss:				
Remeasurements of defined benefit plans	74	(70)	(28)	(24)
Unrealized net change in fair value of financial assets at fair value through other comprehensive income	—	17	8	7
Share of other comprehensive income of associates	—	0.014	—	—
Total other comprehensive income (loss) for the period, net of income tax	(215)	54	198	171
Total comprehensive income for the year	₩ 1,497	₩ 2,333	₩ 2,527	US$ 2,183

Note:

(1) The U.S. dollar amounts have been translated into Won at ₩1,157.8 to US$1.00, the Market Exchange Rate as announced by Seoul Money Brokerage Services, Ltd. on December 31, 2019.

	As of December 31,			
	2017	2018	2019	
				(in millions of
	(in billions of Won)			*U.S. dollars)*[1]
Statements of Financial Position Information				
Assets				
Cash and due from banks	₩ 18,662	₩ 13,150	₩ 24,050	US$ 20,772
Securities at fair value through profit or loss	—	15,612	18,716	16,165
Trading assets	11,216	—	—	—
Derivative assets	2,604	1,484	2,102	1,816
Loans at amortized cost, net	—	251,234	268,172	231,622
Loans at fair value through profit or loss	—	645	869	751
Loans, net	231,732	—	—	—
Securities at fair value through other comprehensive income	—	31,878	40,656	35,115
Available-for-sale financial assets	32,496	—	—	—
Securities at amortized cost	—	16,824	20,252	17,492
Held-to-maturity financial assets	14,823	—	—	—
Property and equipment	2,056	2,014	2,465	2,129
Intangible assets	300	316	656	567
Investments in associates	100	110	128	111
Investment properties	598	572	636	549
Defined benefit assets	34	—	—	—
Current tax assets	25	43	31	27
Deferred tax assets	407	223	243	210
Other assets	9,253	14,411	13,735	11,862
Non-current assets held for sale	8	8	12	10
Total assets	₩324,314	₩348,524	₩392,723	US$339,198
Liabilities				
Deposits	₩242,654	₩257,893	₩287,615	US$248,415
Financial liabilities at fair value through profit or loss	—	480	508	439
Trading liabilities	435	—	—	—
Derivative liabilities	2,993	1,772	1,894	1,636
Borrowings	14,618	16,155	17,326	14,964
Debt securities issued	25,459	31,899	38,030	32,847
Defined benefit liabilities	4	71	56	49
Provisions	259	285	269	232
Current tax liabilities	211	319	399	344
Deferred tax liabilities	12	23	30	26
Other liabilities	15,015	15,434	20,503	17,709
Total liabilities	₩301,660	₩324,331	₩366,630	US$316,661
Total equity	₩ 22,654	₩ 24,193	₩ 26,093	US$ 22,537
Total liabilities and equity	₩324,314	₩348,524	₩392,723	US$339,198

Note:

(1) The U.S. dollar amounts have been translated into Won at ₩1,157.8 to US$1.00, the Market Exchange Rate as announced by Seoul Money Brokerage Services, Ltd. on December 31, 2019.

Selected Ratios

Except as otherwise indicated, the following ratios are calculated using the Bank's audited consolidated financial statements as of and for the years ended December 31, 2017, 2018 and 2019.

Profitability Ratios

	For the Year Ended December 31,		
	2017	2018	2019
	(in percentages)		
Net income as a percentage of:			
Average total assets[(1)]	0.55	0.67	0.62
Average stockholders' equity[(1)]	7.67	9.86	9.20
Net interest spread[(2)]	1.69	1.73	1.65
Net interest margin[(3)]	1.75	1.81	1.72
Cost-to-income ratio[(4)]	59.10	49.32	50.53
Efficiency ratio[(5)]	88.15	80.11	83.32
Cost-to-average-assets ratio[(6)]	5.11	3.73	4.09
Equity-to-average-asset ratio	7.12	6.81	6.73

Notes:

(1) Based on the daily simple average balance of total assets or stockholders' equity. Total assets refer to total assets in the bank accounts.

(2) Net interest spread represents the difference between the yield on average interest-earning assets and cost of average interest-bearing liabilities.

(3) Net interest margin represents the ratio of net interest income to average interest-earning assets.

(4) Calculated as the ratio of general and administrative expenses to the sum of net interest income and net non-interest income (excluding general and administrative expenses).

(5) Efficiency ratio represents the ratio of non-interest expense to the sum of net interest income and non-interest income, a measure of efficiency for banks.

(6) Cost-to-average-assets ratio, a measure of cost of funding used by banks, represents the ratio of non-interest expense to average total assets.

Capital Ratios[(1)]

	As of December 31,		
	2017	2018	2019
	(in percentages)		
Total capital adequacy (BIS) ratio	15.59	16.03	15.91
Common equity Tier I capital adequacy ratio	12.83	12.89	12.75
Tier I capital adequacy ratio	13.24	13.29	13.30
Tier II capital adequacy ratio	2.35	2.73	2.61

Note:

(1) Computed on a consolidated basis pursuant to the guidelines set forth in the amended Detailed Regulation on the Supervision of the Banking Business implementing capital requirements of Basel III in Korea. See "*Supervision and Regulation — Principal Regulations Applicable to Banks — Capital Adequacy*."

Asset Quality Ratios

The following asset quality ratios are presented on a separate basis.

	As of December 31,		
	2017	2018	2019
	(in billions of Won, except percentages)		
Substandard and below loans[(1)]	₩ 1,154	₩ 1,036	₩ 1,105
Substandard and below loans as a percentage of total loans	0.55%	0.46%	0.45%
Substandard and below loans as a percentage of total assets	0.36%	0.30%	0.28%
Precautionary loans as a percentage of total loans[(2)]	0.39%	0.42%	0.36%
Precautionary and below loans as a percentage of total loans[(2)]	0.94%	0.87%	0.81%
Precautionary and below loans as a percentage of total assets[(2)]	0.61%	0.57%	0.50%
Allowance for loan losses as a percentage of substandard and below loans	244.74%	291.06%	276.21%
Allowance for loan losses as a percentage of precautionary and below loans[(2)]	142.82%	152.76%	155.05%
Allowance for loan losses as a percentage of total loans	1.34%	1.34%	1.26%
Substandard and below credits as a percentage of total credits[(3)]	0.55%	0.45%	0.45%
Loans in Won as a percentage of deposits in Won	99.25%	99.23%	95.39%

Notes:

(1) Substandard and below loans (other than loans provided from the Bank's trust accounts and confirmed guarantees and acceptances) are defined in accordance with the regulatory guidance in Korea. See "*Supervision and Regulation — Principal Regulations Applicable to Banks*."

(2) As defined by the FSC.

(3) Credits include loans provided from the Bank's trust accounts and confirmed guarantees and acceptances, as well as the total loan portfolio of the Bank's bank accounts.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with, and is qualified in its entirety by reference to, the Bank's audited consolidated financial statements as of and for the years ended December 31, 2017, 2018 and 2019 and the notes thereto included elsewhere in this offering circular. Unless specified otherwise, all financial information set forth below is presented on a consolidated basis. The discussion contains forward-looking statements and reflects the Bank's current view with respect to future events and financial performance. Actual results may differ materially from those anticipated in these forward-looking statements as a result of certain factors such as those set forth under "Risk Factors" and elsewhere in this offering circular.

Overview

The Bank is one of the leading commercial banks in Korea in terms of total assets, revenues, profitability and capital adequacy, among others. A flagship member of Shinhan Financial Group, one of the leading financial holding companies in Korea in terms of total assets, revenues, profitability and capital adequacy, among others, the Bank provides a wide range of commercial and other banking services to retail and corporate customers primarily in Korea and, to a lesser extent, in select overseas markets. The Bank is one of the largest lenders in Korea to small- and medium-sized enterprises. As of December 31, 2019, the Bank had 876 domestic branches and 14 overseas branches as well as 11 subsidiaries, each in Japan, the People's Republic of China, Hong Kong, Vietnam, the United States, Canada, Germany, Cambodia, Kazakhstan, Mexico and Indonesia.

Most of the Bank's assets are located in, and the Bank generates most of its income from, Korea. Accordingly, the Bank's business and profitability are largely dependent on the general economic and social conditions in Korea, including interest rates, inflation, exports, personal expenditures and consumption, unemployment, demand for business products and services, debt service burden of households and businesses, the general availability of credit, the asset value of real estate and securities and other factors affecting the financial well-being of the Bank's corporate and retail customers. The Korean economy is closely integrated with, and is significantly affected by, developments in the global economy and financial markets. In recent years, the global economy and financial markets experienced adverse conditions and volatility, which also had an adverse impact on the Korean economy and in turn on the Bank's business and profitability. See *"Risk Factors — Risks Relating to the Bank's Business — Difficult conditions and turbulence in the Korean and global economy and financial markets may adversely affect the Bank's business, asset quality, capital adequacy and earnings*."

The Bank derives most of its income from interest earned on its corporate and retail loans, net of funding costs (which primarily consist of interest payable on customer deposits). Net interest income is largely a function of the average volume of loans and the net interest spread thereon.

In 2018, the average volume of retail loans increased by 9.1% from 2017, primarily due to an increase in home rental long-term deposit loans. In 2018, the average volume of corporate loans increased by 7.3% from 2017, primarily as a result of increased loans to SOHO and small- and medium-sized enterprises in the manufacturing, real estate and service industries.

In 2019, the average volume of retail loans increased by 9.4% from 2018, primarily as a result of a continued increase in home rental long-term deposit loans. In 2019, the average volume of corporate loans increased by 8.5% from 2018, primarily as a result of an increase in facilities loans as the Bank increased its target loan growth in 2019 to match an expected increase in funding, for example, upon the Bank's designation as the primary bank for Seoul Metropolitan Government and Incheon Metropolitan City.

From 2017 to 2018, both the average yield on interest-earning assets and the average rate on interest-bearing liabilities increased, primarily due to the increase in base interest rate by the Bank of Korea in November 2017 and November 2018. The average balance increased for both interest-earning assets and interest-bearing liabilities. The Bank's net interest income increased by 11.9% from ₩4,992 billion in 2017 to ₩5,586 billion in

2018. Net interest income after provision for loan losses amounted to ₩4,510 billion and ₩5,340 billion in 2017 and 2018, respectively. The Bank's operating income increased by 43.5% from ₩2,206 billion in 2017 to ₩3,165 billion in 2018.

From 2018 to 2019, both the average yield on interest-earning assets and the average rate on interest-bearing liabilities increased, primarily as the base interest rate set by the Bank of Korea was increased from 1.50% to 1.75% in November 2018, resulting in a higher average market interest rate for 2019 compared to 2018, notwithstanding decreases in the base interest rate by the Bank of Korea from 1.75% to 1.50% in July 2019 and from 1.50% to 1.25% in October 2019. The average balance increased for both interest-earning assets and interest-bearing liabilities. The Bank's net interest income increased by 5.1% from ₩5,586 billion in 2018 to ₩5,872 billion in 2019. Net interest income after provision for loan losses amounted to ₩5,340 billion and ₩5,501 billion in 2018 and 2019, respectively. The Bank's operating income increased by 3.1% from ₩3,165 billion in 2018 to ₩3,263 billion in 2019

Trends in the Korean Economy

In 2019, the global economy showed signs of deepening slowdown with the manufacturing sector at the epicenter, as overseas trade decreased sharply due to the escalation of the U.S.-China trade conflicts. With the prices of electronic parts, chemicals and raw materials, including semiconductors, generally declining compared to 2018, trade volume also decreased, leading to a downward trend of the global economy and dampening the growth of export-oriented countries, such as Germany, China and Korea. According to the International Monetary Fund, the global economic growth rate for 2019 is estimated to fall below 3 percent, which would be the lowest growth rate since the 2008 global financial crisis. Global economic uncertainties are expected to continue in 2020, including the recent coronavirus (COVID-19) outbreak and potential escalation of ongoing trade wars between major economies including the U.S. and China, among others. There are also uncertainties stemming from political events in major countries, including Korea's general elections in April 2020 and the U.S. presidential election in November 2020. Any of these events or uncertainties may have a material adverse effect on the global economy and also the Bank's business, financial condition and results of operations.

In 2019, the Korean economy recorded a growth rate of 2.0% compared to a growth rate of 2.7% in 2018, showing signs of slowdown as exports of Korea's major export products, including semiconductors, decreased as a result of a decrease in global demand mainly due to escalated U.S.-China trade disputes. Investments in the construction industry also decreased due to decreases in facility investments amid slowing exports as well as the Government's strengthened regulations in the real estate market and reduced investment in social overhead capital ("**SOC**"). Despite the general economic slowdown, domestic household purchasing power remained stable due to increased welfare spending by the Government for low-income households. However, overall economic growth was further weakened by structural factors such as the aging and declining population. In 2020, the overall sluggishness in the Korean economy is expected to continue as persisting uncertainty in the global economic environment is expected to continue affecting the Korean economy. In particular, petrochemical and other export items with high demands from China are expected to continue to experience a negative impact due to the economic slowdown in China amidst the recent coronavirus (COVID-19) outbreak, and although the decline in price for semiconductors, Korea's main export item, may slow, it remains uncertain whether semiconductor exports will increase amidst global economic uncertainties. Facility investment in Korea has declined sharply during the past two years, and the global political and economic uncertainties are expected to continue to discourage companies from actively investing in new facilities in Korea. Investment in the housing sector is similarly expected to remain low due to the Government's tightening regulations on the real estate market, and structural factors such as the aging population will continue to persist. Although it is expected that the Government will implement policies to mitigate downturn in the economy, for example large-scale fiscal spending and welfare spending, Korea's economy is expected to continue to experience low growth rates despite any fiscal expansion policy adopted by the Government. In particular, it is expected that factors such as a decline in exports, consumption and tourism if the recent coronavirus (COVID-19) outbreak were to be prolonged, as well as increased volatility in the financial markets and the possibility of escalations of trade disputes between major economies will pose downside risks to the domestic economy in 2020.

In 2020, we consider the following as potential risks to the Korean economy: (i) possibility of a global recession in major markets due to the recent coronavirus (COVID-19) outbreak and resulting decline in consumer confidence; (ii) the increased volatility of foreign currency exchange markets due to the varying monetary policies of the global economies including decreases in base interest rates, fiscal and monetary easing policies; (iii) a prolonged slump in the Korean economy resulting from slowing of job creation and exacerbation of unemployment issues, particularly a rise in youth unemployment; (iv) China's slowing growth and the possibility of a hard landing for China; (v) potential decline in productivity due to aging demographics and low birth rates; (vi) uncertainty and volatility regarding the political and economic policies, including growing protectionism, of the United States and other major economies; (vii) concerns within the financial sectors due to high levels of household debt; and (viii) political risks including political instability due to North Korea.

As for interest rate movements, since 2009, Korea, like many other countries, has experienced a low interest rate environment despite some marginal fluctuations, in part due to the Government's policy to stimulate the economy through active rate-lowering measures. Between 2009 and 2014, the base interest rate set by the Bank of Korea remained within the band between 2.00% and 3.25%. In an effort to support Korea's economy amidst a slowdown in Korea's growth and uncertain global economic prospects, the Bank of Korea reduced the base interest rate to 1.75% in March 2015, 1.50% in June 2015 and further reduced such rate to the historic low of 1.25% in June 2016. In November 2017, the Bank of Korea raised the base interest rate to 1.50%, marking the first time it increased the base interest rate since 2011, and in November 2018 further raised the base interest rate from 1.50% to 1.75%, citing concerns over household debt in the aggregate exceeding ₩1,500 trillion and potential outflow of funds due to the widening interest rate differential between the base interest rate of the Bank of Korea and the benchmark interest rate of the Federal Reserve Board. After increasing its benchmark interest rate three times during 2017, the Federal Reserve Board increased its benchmark interest rate four times during 2018, to a range of 2.25% to 2.50% in December 2018 when it signaled that it expected to raise the benchmark interest rate another two times during 2019. However, the Federal Reserve Board actually reduced the benchmark interest rate three times during 2019 amidst signs of slowdown in the U.S. and major global economies and recently lowered the rate again to a range of 1.0% to 1.25% on March 3, 2020 and to a range of 0% to 0.25% on March 15, 2020 in response to the threat posed to the economy by the recent coronavirus (COVID-19) outbreak. Similarly, the Bank of Korea also lowered the base interest rate from 1.75% to 1.50% in July 2019 and from 1.50% to 1.25% in October 2019, and further reduced the base interest rate from 1.25% to 0.75% on March 16, 2020 in response to the recent coronavirus (COVID-19) outbreak. The Bank of Korea's policy path of interest rates in 2020 and for the foreseeable future remains uncertain and will be affected in part by the policy path of the Federal Reserve Board, which also remains uncertain for the foreseeable future. The recent decreases in base interest rate by the Bank of Korea are expected to put further downward pressure on the Bank's net interest margin, particularly if the base interest rate is decreased again during 2020.

Interest Rates

Interest rate movements, in terms of magnitude and timing as well as their relative impacts on the Bank's assets and liabilities, have a significant impact on the Bank's net interest margins and profitability, particularly with respect to its financial products that are sensitive to such movements. For example, if the interest rates applicable to the Bank's loans (which are recorded as its assets) decrease at a faster pace or by a thicker margin, or increase at a slower pace or by a thinner margin, compared to the interest rates applicable to its deposits (which are recorded as its liabilities), the Bank's net interest margin will shrink and its profitability will be negatively affected. In addition, the relative size and composition of the Bank's variable rate loans and deposits (as compared to its fixed rate loans and deposits) may also impact the Bank's net interest margin. Furthermore, the difference in the average repricing frequency of the Bank's interest-earning assets (primarily loans) compared to its interest-bearing liabilities (primarily deposits) may also impact the Bank's net interest margin. For example, since the Bank's deposits currently have a longer term, on average, than that of its loans, the Bank's deposits are on average less sensitive to movements in the base interest rates on which the Bank's deposits and loans tend to be pegged, and therefore, an increase in the base interest rates tend to increase the net interest margin of the Bank while a decrease in the base interest rates tend to have the opposite effect. While the Bank continually manages its assets and liabilities to minimize its exposure to interest rate volatility, such efforts by the Bank may not mitigate the impact of interest rate volatility in a timely or effective manner.

The interest rate charged to customers by the Bank is based, in part, on the "cost of funds index", or COFIX, which is published by the Korean Federation of Banks. COFIX is computed based on the weighted average interest of select funding products (including time deposits, housing and other installment savings deposits, repos, discounted bills and senior non-convertible financial debentures) of eight major Korean banks (comprised of the Bank, Kookmin Bank, Woori Bank, KEB Hana Bank, Nonghyup Bank, Industrial Bank of Korea, Citibank Korea and Standard Chartered Bank Korea). Each bank then independently determines the interest rate applicable to its respective customers by adding a spread to the COFIX based on the difference between the COFIX and such bank's general funding costs, administration fees, the customer's credit score, the maturity of the loan and other customer-specific premiums and discounts based on the customer relationship with such bank. These interest rates are typically adjusted on a monthly basis.

The following table shows certain benchmark Won-denominated borrowing interest rates as of the dates indicated.

	Corporate Bond Rates(1)	Treasury Bond Rates(2)	Certificate of Deposit Rates(3)	COFIX Balance-Based(4)	New COFIX Balance-Based(5)	COFIX New Borrowing-Based(6)
June 30, 2015	2.01	1.79	1.65	2.22	—	1.75
December 31, 2015	2.11	1.66	1.67	1.90	—	1.66
June 30, 2016	1.69	1.25	1.37	1.75	—	1.54
December 31, 2016	2.13	1.64	1.52	1.62	—	1.51
June 30, 2017	2.24	1.70	1.38	1.58	—	1.47
December 31, 2017	2.68	2.14	1.66	1.66	—	1.77
June 30, 2018	2.77	2.12	1.65	1.83	—	1.82
December 31, 2018	2.29	1.82	1.93	1.95	—	1.96
June 30, 2019	1.80	1.47	1.78	2.00	—	1.85
December 31, 2019	1.78	1.36	1.53	1.81	1.55	1.63

Source: Korea Financial Investment Association

Notes:

(1) Measured by the yield on three-year AA- rated corporate bonds.

(2) Measured by the yield on three-year treasury bonds.

(3) Measured by the yield on certificates of deposit (with maturity of 91 days).

(4) Measured based on the weighted average of the borrowing rates for the monthly ending balances of the funding made by the commercial banks that are subject of the COFIX reporting.

(5) New COFIX on Outstanding Balance (the "**New COFIX**") is a new benchmark COFIX introduced since July 2019. The New COFIX also takes into account other deposits such as inter-bank time deposits and non-resident deposits and other funding sources such as subordinated bonds and convertible bonds in calculating the weighted average of the borrowing rates for the monthly ending balances of the funding made by the commercial banks that are subject of the COFIX reporting.

(6) Measured based on the weighted average of the borrowing rates for new funding for each month made by the commercial banks that are subject of the COFIX reporting.

Critical Accounting Policies

The preparation of the Bank's financial statements requires management to make judgments, involving significant estimates and assumptions, in the application of certain accounting policies about the effects of matters that are inherently uncertain. These estimates and assumptions, which may materially affect the reported amounts of certain assets, liabilities, revenues and expenses, are based on information available to the Bank as of the date of the financial statements, and changes in this information over time could materially impact amounts reported in the financial statements as a result of the use of different estimates and assumptions. Certain accounting policies, by their nature, have a greater reliance on the use of estimates and assumptions, and could produce results materially different from those originally reported.

Based on the sensitivity of financial statement amounts to the methods, estimates and assumptions underlying reported amounts, the Bank has identified the following significant accounting policies that involve critical accounting estimates. These policies require subjective or complex judgments, and as such could be subject to revision as new information becomes available. The Bank's significant accounting policies are described in more detail in Note 3 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2017 and 2018 and Note 2 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2018 and 2019 included elsewhere in this offering circular.

Recent Accounting Changes

K-IFRS 1109, published on September 25, 2015, is effective for annual periods beginning on or after January 1, 2018. It replaces existing guidance in K-IFRS 1039, Financial Instruments: Recognition and Measurement. The Bank has adopted K-IFRS 1109 for the year beginning after January 1, 2018 and has recognized the accumulated effect resulting from the initial application of K-IFRS 1109 starting January 1, 2018, the date of initial application.

Key features of the new standard, K-IFRS 1109, are (i) classification and measurement of financial assets that reflects the business model in which the assets are managed and their cash flow characteristics, (ii) impairment methodology that reflects the "expected credit loss" model for financial assets and (iii) expanded scope of hedged items and hedging instruments which qualify for hedge accounting and changes in assessment method for effect of hedging relationships.

In principle, K-IFRS 1109 should be applied retrospectively. However, there are clauses exempting the Bank from restating the comparative information with respect to classification, measurement of financial instruments and impairment. In addition, for hedge accounting, the new standard will be applied prospectively, except for certain cases such as accounting for the time value of options.

The Bank's audited consolidated financial statements as of and for the year ended December 31, 2018 have been prepared in accordance with K-IFRS 1109, and the accompanying comparative consolidated financial statements as of and for the year ended December 31, 2017 have not been retrospectively adjusted.

Details on the adjustments to the carrying amounts of financial assets and financial liabilities, the adjustments to credit loss allowance, and the effects on equity as a result of initial application of K-IFRS 1109 are presented in Note 46 to the Bank's audited consolidated financial statements as of and for the year ended December 31, 2017 and 2018 included elsewhere in this offering circular.

The Bank has also adopted K-IFRS 1115, Revenue from Contracts with Customers, published on November 6, 2015, for the year beginning on January 1, 2018. K-IFRS 1115 replaces existing revenue recognition guidance, including K-IFRS 1018, Revenue; K-IFRS 1011, Construction Contracts; K-IFRS 2031, Revenue-Barter Transactions Involving Advertising Services; K-IFRS 2113, Customer Loyalty Programs; K-IFRS 2115, Agreement for the Construction of Real Estate and K-IFRS 2118, Transfers of Assets from Customers.

According to K-IFRS 1115, all types of contracts recognize revenue through five-step revenue recognition model: (1) identifying the contract, (2) identifying performance obligations, (3) determining the transaction price, (4) allocating the transaction price to performance obligations and (5) recognizing the revenue by satisfying performance obligations.

The Bank has elected to retrospectively apply K-IFRS 1115 and reflected the cumulative financial effect of the initial application of K-IFRS 1115 at the date of initial recognition, in accordance with the transitional provision of K-IFRS 1115. The accompanying comparative consolidated financial statements as of and for the year ended December 31, 2017 have not been retrospectively adjusted. Effects on equity as a result of initial application of K-IFRS 1115 are presented in Note 46 to the Bank's audited consolidated financial statements as of and for the year ended December 30, 2017 and 2018 included elsewhere in this offering circular.

Additionally, the Bank has adopted K-IFRS 1116, Leases, published on May 22, 2017, for the year beginning on January 1, 2019. K-IFRS 1116 replaces existing standards including K-IFRS 1017, Leases; K-IFRS 2104, Determining whether an Arrangement contains a Lease; K-IFRS 2015, Operating Leases – Incentives; and K-IFRS 2027, Evaluating the Substance of Transactions Involving the Legal Form of a Lease.

At the inception of a contract, an entity shall assess whether the contract is, or contains, a lease, and identify whether the contract is, or contains, a lease in accordance with K-IFRS 1116 at the date of initial application.

For a contract that is, or contains, a lease, a lessee or a lessor shall account for each lease component within the contract as a lease separately from non-lease components of the contract.

A lessee shall recognize a lease right-of-use asset, which represents a lessee's right to use an underlying asset (leased asset) for the lease term, and a lease liability, which represents an obligation to make lease payments. However, a lessee may elect not to apply the requirements to short-term leases and leases for which the underlying asset is of low value. Also, the Bank used the following practical expedients when applying K-IFRS 1116 to leases previously classified as operating leases under K-IFRS 1017.

- Elects not to apply the requirements to recognize lease right-of-use assets and lease liabilities to leases for which the lease term ends within 12 months of the date of initial application.

- Excludes initial direct costs from the measurements of the right-of-use assets at the date of initial application.

- If the contract contains an option to extend or terminate the lease, hindsight is used to determine the lease term.

The consolidated statement of financial position of the Bank as of December 31, 2019, consolidated statements of comprehensive income, changes in equity and cash flows for the year then December 31, 2019 and related notes have been prepared in accordance with K-IFRS 1116. Also, pursuant to the transition rules of K-IFRS 1116, the comparative consolidated financial statements as of and for the year ended December 31, 2018 have not been retrospectively restated.

Details of the right-of-use assets and lease liabilities resulting from the initial application of K-IFRS 1116 are presented in Notes 12 and 44 to the Bank's audited consolidated financial statements as of and for the year ended December 31, 2018 and 2019 included elsewhere in this offering circular.

Additionally, the Bank has adopted amendments to K-IFRS 1109, 'Financial Instruments' and K-IFRS 1107, 'Financial Instruments: Disclosures', for the year beginning on January 1, 2019. The interest rate index reform has added an exception that allows hedge accounting to be applied while uncertainty exists. In a hedging relationship, it is assumed that the interest rate index underlying cash flows is not changed by the interest rate index reform when reviewing the occurrence of forecast transaction and the prospective assessment of the hedge effectiveness. For hedges of non-contractually specified interest rate risk components, the requirement that the hedged risk should be separately identifiable applies only at the inception of the hedging relationship. Through the interest rate index reform, this application of exception is ended when the timing and amount of cash flows based on the interest rate index will no longer appear or the hedging relationship is discontinued. These amendments take effect on January 1, 2020 but have been applied early as early adoption is allowed. Significant interest rate indicators for hedging relationships are LIBOR and CD rates. The subject affected by this amendment is the hedge accounting as disclosed in Note 8 to the Bank's audited consolidated financial statements as of and for the year ended December 31, 2018 and 2019 included elsewhere in this offering circular.

Basis of Measurement

The consolidated financial statements have been prepared on the historical cost basis except for the following material items in the consolidated statements of financial position:

- derivative financial instruments that are measured at fair value;
- financial instruments at fair value through profit or loss ("**FVTPL**") that are measured at fair value;
- financial instruments at fair value through other comprehensive income ("**FVOCI**") that are measured at fair value;
- share-based payment arrangements that are measured at fair value;
- changes in fair value attributable to the risk being hedged for financial instruments designated as hedged items in qualifying fair value hedge relationships are recognized in profit or loss; and
- liabilities for defined benefit plans that are recognized as net of the total present value of defined benefit obligations less the fair value of plan assets.

Expected Credit Loss on Financial Assets

As for financial assets at amortized cost and financial assets at FVOCI, the expected credit loss is evaluated at the end of each period and recognized as loss allowances.

Subsequent to initial recognition, loss allowance is classified in three stages depending on the extent of significant increase in credit risk, as set out in the table below.

Stage	Category	Description
Stage 1	Credit risk has not increased significantly since initial recognition	12-month expected credit losses: Expected credit loss resulting from potential default of financial instruments occurring over 12 months from the end of reporting period
Stage 2	Credit risk has increased significantly since initial recognition	Lifetime expected credit losses: Expected credit loss resulting from all potential default of financial instruments occurring over the expected life
Stage 3	Credit-impaired financial assets	

For financial assets whose credit is impaired at initial recognition, the cumulative change in lifetime expected credit loss is only recognized as loss allowance. In this context, 'lifetime' refers to the expected life of a financial asset until its contractual maturity date.

Forward looking information. The Bank determines material increase on credit risk and estimates expected credit loss on a forward looking basis. The components used to measure expected credit loss are assumed to have certain relationships with the economic cycle and macroeconomic variables. Forward looking information is reflected in the expected credit loss estimation through the relationship analysis between the macroeconomic variables and credit risk measuring factors.

Financial assets at amortized cost. The expected credit loss on financial assets at amortized cost is recognized as the difference between the present value of the contractual cash flow and the present value of the expected cash flow. Expected cash flow is estimated separately for each individually material financial asset. The financial assets that are not individually material are included in a group of assets with a similar credit risk, and expected credit loss is estimated collectively.

Expected credit losses of financial assets measured as amortized cost are presented net of loss allowance, and the allowance is derecognized together with the asset when it is determined to be unrecoverable. When a loan previously written-off is subsequently collected, it is recognized as an increase in loss allowance. At each reporting date, the Bank recognizes in profit or loss the amount of the change in lifetime expected credit losses.

Financial assets at fair value at other comprehensive income. The expected credit loss on financial assets at fair value at other comprehensive income is calculated using the same method as that on financial assets at amortized cost. However, the changes in loss allowance are recognized as other comprehensive income. As for disposal and repayment, the loss allowance is reclassified from other comprehensive income to profit or loss.

Financial Guarantee Contract

Financial guarantees are contracts that require the Bank to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the terms of a debt instrument. Financial guarantee liabilities are recognized initially at their fair value, and the initial fair value is amortized over the life of the financial guarantee. The financial guarantee liability is subsequently carried at the higher of this amortized amount and the present value of any expected payment when a payment under the guarantee has become probable. Financial guarantees are included other liabilities.

Defined Benefit Plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Bank's net obligation in respect of defined benefit plans is calculated by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of plan assets is deducted. The calculation is performed annually by an independent actuary using the projected unit credit method. The discount rate is the yield at the reporting date on high-quality corporate bonds that have maturity dates approximating the terms of the Bank's obligations and that are denominated in the same currency in which the benefits are expected to be paid. The Bank recognizes service cost and net interest on the net defined benefit liability (asset) in profit or loss and remeasurements of the net defined benefit liability (asset) in other comprehensive income.

Average Balance and Volume and Rate Analysis

Average Balance Sheet and Related Interest

The following tables show the Bank's average balances and interest rates, as well as the net interest spread, net interest margin and asset liability ratio, for the years ended December 31, 2017, 2018 and 2019.

	For the Year Ended December 31,								
	2017			2018			2019		
	Average Balance(1)	Interest Income/ Expense	Yield/ Rate	Average Balance(1)	Interest Income/ Expense	Yield/ Rate	Average Balance(1)	Interest Income/ Expense	Yield/ Rate
	(in billions of Won, except percentages)								
Interest-earning assets:									
Due from banks	₩ 6,737	₩ 90	1.33%	₩ 6,563	₩ 107	1.62%	₩ 6,058	₩ 125	2.06%
Securities at FVTPL	—	—	—	14,442	222	1.53	18,325	291	1.58
Trading assets(2)	12,570	182	1.45	—	—	—	—	—	—
Loans at amortized cost(3):									
Retail loans	98,643	3,034	3.08	107,631	3,597	3.34	117,798	4,007	3.40
Corporate loans	118,369	3,736	3.16	126,964	4,383	3.45	137,727	4,755	3.45
Public and other loans	2,050	67	3.31	2,392	84	3.50	3,024	107	3.53
Loans to banks	5,355	111	2.21	4,884	121	2.66	3,972	104	2.64
Total loans at amortized cost	224,417	6,948	3.10	241,871	8,185	3.39	262,521	8,973	3.42
Loans at FVTPL	—	—	—	460	12	2.71	581	16	2.80
Securities(2):									
Securities at FVOCI	—	—	—	30,280	608	2.01	34,871	716	2.05
Available-for-sale financial assets	28,655	488	1.70	—	—	—	—	—	—
Securities at amortized cost	—	—	—	15,517	404	2.60	19,608	467	2.38
Held-to-maturity financial assets	12,896	356	2.76	—	—	—	—	—	—
Total securities	41,551	844	2.03	45,797	1,012	2.21	54,479	1,183	2.17
Other interest-earning assets	—	59	—	—	59	—	—	67	—
Total interest-earning assets	₩285,275	₩8,123	2.85%	₩309,133	₩9,597	3.10%	₩341,964	₩10,655	3.12%
Non-interest-earning assets:									
Cash and due from banks	₩ 10,562			₩ 11,122			₩ 12,338		
Derivative assets	1,464			1,822			2,255		
Securities at FVOCI	—			448			525		
Available-for-sale financial assets	1,087			—			—		
Property and equipment and intangible assets	2,322			2,364			3,233		
Other non-interest-earning assets	13,018			14,777			15,765		
Total non-interest-earning assets	₩ 28,453			₩ 30,533			₩ 34,116		
Total assets	₩313,728	₩8,123		₩339,666	₩9,597		₩376,080	₩10,655	

	For the Year Ended December 31,								
	2017			2018			2019		
	Average Balance(1)	Interest Income/ Expense	Yield/ Rate	Average Balance(1)	Interest Income/ Expense	Yield/ Rate	Average Balance(1)	Interest Income/ Expense	Yield/ Rate
	(in billions of Won, except percentages)								
Interest-bearing liabilities:									
Deposits:									
Demand deposits	₩ 33,981	₩ 120	0.35%	₩ 35,535	₩ 139	0.39%	₩ 38,233	₩ 161	0.42%
Time and savings deposits	186,305	2,165	1.16	200,669	2,703	1.35	220,004	3,189	1.45
Other deposits	8,048	126	1.57	8,459	165	1.96	9,277	192	2.07
Total interest-bearing deposits	228,334	2,411	1.06	244,663	3,007	1.23	267,514	3,542	1.32
Trading liabilities	2	—	—	—	—	—	—	—	—
Borrowings	15,894	207	1.30	16,988	292	1.72	17,430	302	1.73
Debt securities issued	22,689	490	2.16	27,275	641	2.35	36,177	852	2.36
Other interest-bearing liabilities	3,273	23	0.70	3,211	71	2.20	4,573	87	1.89
Total interest-bearing liabilities	₩270,192	₩3,131	1.16%	₩292,137	₩4,011	1.37%	₩325,694	₩ 4,783	1.47%
Non-interest-bearing liabilities:									
Non-interest-bearing deposits	₩ 3,587			₩ 3,520			₩ 3,516		
Derivatives liabilities	1,720			2,339			2,151		
Other non-interest-bearing liabilities	15,904			18,547			19,414		
Total non-interest-bearing liabilities	₩ 21,211			₩ 24,406			₩ 25,081		
Total liabilities	₩291,403	₩3,131		₩316,543	₩4,011		₩350,775	₩ 4,783	
Stockholder's equity	22,325	—		23,123	—		25,305	—	
Total liabilities and equity	₩313,728	₩3,131		₩339,666	₩4,011		₩376,080	₩ 4,783	
Net interest spread(4)			1.69%			1.73%			1.65%
Net interest margin(5)			1.75%			1.81%			1.72%
Average asset liability ratio(6)			105.58%			105.82%			105.00%

Notes:

(1) Based on average daily balances.

(2) Information is presented on an annualized basis.

(3) Impaired loans are included in the respective average loan balances. Interest income on such impaired loans is recognized by using the original effective interest rate, which also is used in measuring loan losses.

(4) The difference between the average rate of interest earned on interest-earning assets and the average rate of interest paid on interest-bearing liabilities.

(5) The ratio of net interest income to the average balance of interest-earning assets.

(6) The ratio of the average balance of interest-earning assets to the average balance of average interest-bearing liabilities.

__Analysis of Changes in Net Interest Income — Volume and Rate Analysis__

The following tables provide an analysis of changes in interest income, interest expense and net interest income between changes in volume and changes in rates for (i) 2019 compared to 2018 and (ii) 2018 compared to 2017.

Volume and rate variances have been calculated on the movement in average balances and the change in the interest rates on average interest-earning assets and average interest-bearing liabilities in proportion to absolute volume and rate change. The variance caused by the change in both volume and rate has been allocated in proportion to the absolute volume and rate change.

	From 2018 to 2019 Interest Increase (Decrease) Due to Change in		
	Volume	Rate	Change
	(in billions of Won)		
Increase (decrease) in interest income			
Due from banks	₩(10)	₩ 28	₩ 18
Securities at FVTPL	62	7	69
Loans at amortized cost:			
Retail loans	346	64	410
Corporate loans	372	—	372
Public and other loans	22	1	23
Loans to banks	(24)	7	(17)
Total loans at amortized cost	₩716	₩ 72	₩ 788
Loans at FVTPL	3	1	4
Securities:			
Securities at FVOCI	94	14	108
Securities at amortized cost	97	(34)	63
Total securities	₩191	₩ (20)	₩ 171
Other interest-earning assets	—	8	8
Total interest income	₩962	₩ 96	₩1,058
Increase (decrease) in interest expense			
Deposits:			
Demand deposits	₩ 11	₩ 11	₩ 22
Time and savings deposits	280	206	486
Other deposits	17	10	27
Total interest-bearing deposits	₩308	₩ 227	₩ 535
Borrowings	8	2	10
Debt securities issued.	210	1	211
Other interest-bearing liabilities	26	(10)	16
Total interest expense	₩552	₩ 220	₩ 772
Net increase in net interest income	₩410	₩(124)	₩ 286

	From 2017 to 2018 Interest Increase (Decrease) Due to Change in		
	Volume	Rate	Change
	(in billions of Won)		
Increase (decrease) in interest income			
Due from banks	₩ (3)	₩ 20	₩ 17
Securities at FVTPL	222	—	222
Trading assets	(182)	—	(182)
Loans at amortized cost:			
Retail loans	300	263	563
Corporate loans	297	350	647
Public and other loans	12	5	17
Loans to banks	(13)	25	12
Total loans at amortized cost	₩ 596	₩643	₩1,239
Loans at fair value through profit or loss	12	—	12
Securities:			
Securities at FVOCI	608	—	608
Available-for-sale financial assets	(488)	—	(488)
Securities at amortized cost	404	—	404
Held-to-maturity financial assets	(356)	—	(356)
Total securities	₩ 168	₩ —	₩ 168
Other interest-earning assets	—	(2)	(2)
Total interest income	₩ 813	₩661	₩1,474
Increase (decrease) in interest expense			
Deposits:			
Demand deposits	₩ 6	₩ 13	₩ 19
Time and savings deposits	193	345	538
Other deposits	8	31	39
Total interest-bearing deposits	₩ 207	₩389	₩ 596
Borrowings	19	66	85
Debt securities issued.	108	43	151
Other interest-bearing liabilities	(1)	49	48
Total interest expense	₩ 333	₩547	₩ 880
Net increase in net interest income	₩ 480	₩114	₩ 594

Operating Results

2019 Compared to 2018

Net Interest Income

The following table shows, for the periods indicated, the principal components of the Bank's net interest income.

	Year Ended December 31,		
	2018	2019	% Change
	(in billions of Won, except percentages)		
Interest income:			
Cash and due from banks	₩ 107	₩ 125	16.8%
Securities at FVTPL	222	291	31.1
Loans at amortized cost	8,185	8,973	9.6
Loans at FVTPL	12	16	33.3
Securities at FVOCI	608	716	17.8
Securities at amortized cost	404	467	15.6
Other interest income	59	67	13.6
Total interest income	₩ 9,597	₩10,655	11.0%
Interest expense:			
Deposits	₩(3,007)	₩ (3,542)	17.8%
Borrowings	(292)	(302)	3.4
Debt securities issued	(641)	(852)	32.9
Other interest expense	(71)	(87)	22.5
Total interest expense	₩(4,011)	₩ (4,783)	19.2%
Net interest income	₩ 5,586	₩ 5,872	5.1%
Net interest margin(1)	1.81%	1.72%	

Note:

(1) The ratio of net interest income to average interest-earning assets. See "*Average Balance and Volume and Rate Analysis—Average Balance Sheet and Related Interest*."

Interest income. Interest income increased by 11.0% to ₩10,655 billion in 2019 from ₩9,597 billion in 2018, due primarily to a 9.6% increase in interest income on loans at amortized cost to ₩8,973 billion in 2019 from ₩8,185 billion in 2018, largely as a result of an increase in the average balance of loans, as well as, to a lesser extent, an increase in the average lending rate on the Bank's loans as the base interest rate set by the Bank of Korea was increased from 1.50% to 1.75% in November 2018, resulting in a higher average market interest rate for 2019 compared to 2018, notwithstanding decreases in the base interest rate by the Bank of Korea from 1.75% to 1.50% in July 2019 and from 1.50% to 1.25% in October 2019. The average balance of the Bank's loans at amortized cost increased by 8.5% to ₩262,521 billion in 2019 from ₩241,871 billion in 2018, principally due to increases in the average balances of retail loans and corporate loans as further described below. The average lending rate on the Bank's loans increased to 3.42% in 2019 from 3.39% in 2018, principally due to an increase in average lending rates for retail loans resulting from the higher average market interest rate for 2019 compared to 2018 as discussed above.

More specifically, the increase in interest income was due to the following:

- a 11.4% increase in interest on retail loans to ₩4,007 billion in 2019 from ₩3,597 billion in 2018, primarily due to a 9.5% increase in the average balance of retail loans to ₩117,798 billion in 2019 from ₩107,631 billion in 2018, as well as an increase in the average lending rate for retail loans to 3.40% in 2019 from 3.34% in 2018. The average balance of retail loans increased primarily as a result of the relatively low interest rate environment and increased demand in the housing market despite stricter regulations on maximum debt-to-income and loan-to-value ratios implemented by the Government on mortgage loans. In particular, the volume of mortgage and home equity loans increased as more households chose to purchase homes due to a continued increase in the amounts of long-term deposits required for housing rentals and a decrease in the supply of homes available for long-term deposit leases. The average lending rate for retail loans increased primarily as a result of the general increase in market interest rates largely driven by the increase in the base interest rate by the Bank of Korea in November 2018 as discussed above. The base rate set by the Bank of Korea largely determines the market rates for certificates of deposit, which in turn largely determines the Bank's lending rates for a substantial majority of the Bank's retail loans.

- a 8.5% increase in interest on corporate loans to ₩4,755 billion in 2019 from ₩4,383 billion in 2018, primarily due to a 8.5% increase in the average balance of corporate loans to ₩137,727 billion in 2019 from ₩126,964 billion in 2018, despite the average lending rate for corporate loans remaining stable. The average balance of corporate loans increased principally as a result of an increase in facilities loans as the Bank increased its target loan growth in 2019 to match an expected increase in funding, for example, upon the Bank's designation as the primary bank for Seoul Metropolitan Government and Incheon Metropolitan City. The average lending rate for corporate loans remained stable at 3.45% for 2018 and 2019 due to an increase in loans to corporate borrowers with high credit ratings which have lower interest rates.

Interest expense. Interest expense increased by 19.2% to ₩4,783 billion in 2019 from ₩4,011 billion in 2018 due primarily to a 17.8% increase in interest expense on deposits to ₩3,542 billion in 2019 from ₩3,007 billion in 2018 and, to a lesser extent, a 32.9% increase in interest expenses on debt securities issued to ₩852 billion in 2019 from ₩641 billion in 2018.

Interest expense on deposits increased primarily due to a 9.3% increase in the average balance of deposits to ₩267,514 billion in 2019 from ₩244,663 billion in 2018, as well as an increase in the average interest rate payable on deposits (the ratio of interest expense to average balance of deposits) by 9 basis points to 1.32% in 2019 from 1.23% in 2018. The increase in the average balance of deposits was primarily due to a 9.6% increase in the average balance of time and savings deposits to ₩220,004 billion in 2019 from ₩200,669 billion in 2018, which was largely a result of customers' preference for low-risk investments in light of the continuing uncertainty in financial markets. The increase in the average interest rate payable on deposits resulted mainly from an increase in the average interest rate payable on time and savings deposits to 1.45% in 2019 from 1.35% in 2018. The average interest rate payable on time and savings deposits increased largely as a result of higher average market interest rates for 2019 compared to 2018 as described above.

Interest expense on debt securities issued increased primarily as a result of an increase in the average balance of debt securities issued to ₩36,177 billion in 2019 from ₩27,275 billion in 2018. The increase in the average balance of debt securities issued was primarily due to increased funding requirements resulting from an increase in the average balance of loans.

Net interest margin. Net interest margin represents the ratio of net interest income to the average balance of interest-earning assets. The Bank's overall net interest margin decreased by 9 basis points to 1.72% in 2019 from 1.81% in 2018, due to the increase in average volume of interest-earning assets described above outpacing the increase in net interest income. Net interest spread, which represents the difference between the average rate of interest earned on interest-earning assets and the average rate of interest paid on interest-bearing liabilities, decreased by 8 basis points to 1.65% in 2019 from 1.73% in 2018, as the 10 basis point increase in the average rate of interest payable on interest-bearing liabilities to 1.47% in 2019 from 1.37% in 2018 outpaced the 2 basis point increase in the average rate of interest receivable on interest-earning assets to 3.12% in 2019 from 3.10% in 2018. The increase in average rate of interest payable on interest-bearing liabilities outpaced the increase in the average rate of interest receivable on interest-earning assets due to differences in average repricing frequency and relative maturity profiles of interest-earning assets and interest-bearing liabilities. The average volume of interest-earning assets increased by 10.6% to ₩341,964 billion in 2019 from ₩309,133 billion in 2018 largely as a result of an increase in the volume of retail and corporate loans. The average volume of interest-bearing liabilities increased by 11.5% to ₩325,694 billion in 2019 from ₩292,137 billion in 2018 largely as a result of an increase in deposits, primarily driven by customers' preference for low-risk investments in light of the continuing uncertainty in financial markets and the Bank's effort to attract more low cost deposits.

Fees and Commission Income (Expense), Net

The following table shows, for the periods indicated, the principal components of the Bank's net fees and commission income.

	Year Ended December 31,		
	2018	2019	% Change
	(in billions of Won, except percentages)		
Fees and commission income:			
Credit placement fees	₩ 55	₩ 60	9.1%
Commission received as electronic charge receipt	146	151	3.4
Brokerage fees	98	109	11.2
Commission received as agency	324	306	(5.6)
Investment banking fees	71	107	50.7
Commission received in foreign exchange activities	189	196	3.7
Asset management fees from trust accounts	192	238	24.0
Guarantee fees	70	79	12.9
Others	113	121	7.1
Total fees and commission income	₩1,258	₩1,367	8.7%
Fees and commission expense:			
Credit-related fees	₩ (35)	₩ (39)	11.4%
Brand-related fees	(35)	(36)	2.9
Service-related fees	(26)	(33)	26.9
Trading and brokerages fees	(9)	(10)	11.1
Commission paid in foreign exchange activities	(39)	(47)	20.5
Others	(77)	₩ (85)	10.4
Total fees and commission expense	₩ (221)	₩ (250)	13.1
Net fees and commission income	₩1,037	₩1,117	7.7%

Net fees and commission increased by 7.7% to ₩1,117 billion in 2019 from ₩1,037 billion in 2018, primarily as a result of a 24.0% increase in asset management fees from trust accounts to ₩238 billion in 2019 from ₩192 billion in 2018 and a 50.7% increase in investment banking fees to ₩107 billion in 2019 from ₩71 billion in 2018, which was partially offset by a 5.6% decrease in commission received as agency to ₩306 billion in 2019 from ₩324 billion in 2018. Asset management fees from trust accounts increased primarily due to an increase in management fees from specified money trusts. Investment banking fees increased largely as a result of increased brokerage and advisory fees for mergers and acquisitions and other corporate transactions. Commission received as agency decreased primarily due to a decrease in commission received as agency on credit cards.

Non-interest Income (Expense), Net

The following table sets forth for the periods indicated the components of the Bank's net non-interest income (expense).

	Year Ended December 31,		
	2018	2019	% Change
	(in billions of Won, except percentages)		
Dividend income	₩ 16	₩ 15	(6.3)%
Gain on financial instruments at FVTPL	359	234	(34.8)
Net foreign currencies transaction gain	142	318	123.9
Net gain on disposal of financial assets at FVOCI	16	108	575.0
Provision for credit loss allowance	(243)	(377)	55.1
General and administrative expenses	(3,062)	(3,142)	2.6
Other operating expenses, net	(686)	(882)	28.6
Net non-operating loss	(18)	(185)	927.8
Share of profit (loss) of associates	(1)	₩ (1)	—
Total net non-interest expense	₩(3,477)	₩(3,912)	12.5%

Net non-interest expense increased by 12.5% to ₩3,912 billion in 2019 from ₩3,477 billion in 2018, due primarily to a 28.6% increase in net other operating expenses, as well as a 972.7% increase in net non-operating loss to ₩185 billion in 2019 from ₩17 billion in 2018, which was partially offset by a 123.9% increase in net foreign currencies transactions gain to ₩318 billion in 2019 from ₩142 billion in 2018. The increase in net other operating expenses was primarily due to amortization of contributions made by the Bank to the Seoul Metropolitan Government and Incheon Metropolitan City upon being selected as the primary bank for each of these government entities. The increase in net non-operating loss was primarily due to asset impairment loss realized upon amortization of the contributions made by the Bank to the Seoul Metropolitan Government and Incheon Metropolitan City described above. The increase in net foreign currencies transactions gain was primarily due an increase in foreign currency exchange rates amid depreciation in the valuation of the Won.

Provision for Credit Loss Allowance

The following table sets forth for the periods indicated the provision for credit loss allowance by type of financial asset.

	Year Ended December 31,		
	2018	2019	% Change
	(in billions of Won, except percentages)		
Loans:			
Retail	₩138	₩172	24.6%
Corporate	93	203	118.3
Others	15	(4)	N/M
Subtotal	246	371	50.8
Securities[1]	7	5	(28.6)
Others	(10)	1	N/M
Provision for credit loss allowance	₩243	₩377	55.1%

N/M = not meaningful.

Note:

(1) Consist of securities at FVOCI and securities at amortized cost.

Provision for credit loss allowance increased by 55.1% to ₩377 billion in 2019 from ₩243 billion in 2018, principally due to a 118.3% increase in provision for credit loss allowance for corporate loans to ₩203 billion in 2019 from ₩93 billion in 2018, as well as an increase in provision for credit loss allowance for retail loans to ₩172 billion in 2019 from ₩138 billion in 2018. Provision for credit loss allowance for corporate loans increased mainly because of an increase in allowance for loan loss on corporate loans resulting from an increase in delinquency ratio and credit deterioration in certain corporate borrowers, as well as an increase in the proportion of unsecured corporate loans which are subject to higher loss given default rates compared to secured corporate loans. Provision for credit loss allowance for retail loans increased mainly due to increased exposure resulting from an increase in the volume of retail loans.

Income Tax Expense

Income tax expense decreased by 13.7% to ₩748 billion in 2019 from ₩867 billion in 2018 primarily as a result of a decrease in profit before income tax by 2.2% to ₩3,077 billion in 2019 from ₩3,146 billion in 2018. The Bank's effective rate of income tax decreased to 24.30% in 2019 compared to 27.56% in 2018.

Profit for the Period

As a result of the foregoing, the Bank's profit for the period increased by 2.2% to ₩2,329 billion in 2019 from ₩2,279 billion in 2018.

Other Comprehensive Income (Loss) for the Period

	Year Ended December 31,		
	2018	2019	% Change
	(in billions of Won, except percentages)		
Items that are or may be reclassified subsequently to profit or loss			
Foreign currency translation differences for foreign operations	₩ 21	₩ 98	366.7%
Unrealized net change in fair value of financial assets at FVOCI	88	117	33.0
Share of other comprehensive income (loss) of associates	(2)	3	N/M
Items that will not be reclassified subsequently to profit or loss			
Remeasurement of defined benefit plans	(70)	(28)	(60.0)
Unrealized net change in fair value of financial assets at FVOCI	17	8	(52.9)
Share of other comprehensive income of associates	0.01	—	N/M
Total other comprehensive income, net of income tax	₩ 54	₩198	266.7

N/M = not meaningful.

Other comprehensive income increased by 266.7% to ₩198 billion in 2019 from ₩54 billion in 2018, due primarily to an increase in foreign currency translation differences for foreign operations, a decrease in loss on remeasurement of defined benefit plans and an increase in unrealized net change in fair value of financial assets at fair value through other comprehensive income. Gain on foreign currency translation differences for foreign operations increased by 366.7% to ₩98 billion in 2019 from ₩21 billion in 2018, primarily due to an increase in foreign currency exchange rates amid depreciation in the valuation of the Won. Loss on remeasurement of defined benefit plans decreased by 60.0% to ₩28 billion from ₩70 billion in 2018, primarily due to a decrease in actuarial loss due to changes in demographic and financial assumptions. Gain on unrealized net change in fair value of financial assets at fair value through other comprehensive income increased by 33.0% to ₩117 billion in 2019 from ₩88 billion in 2018, due primarily to fluctuations in interest rates and stock prices.

2018 Compared to 2017

Net Interest Income

The following table shows, for the periods indicated, the principal components of the Bank's net interest income.

	Year Ended December 31,		
	2017	**2018**	**% Change**
	(in billions of Won, except percentages)		
Interest income:			
Cash and due from banks	₩ 90	₩ 107	18.9%
Securities at FVTPL	—	222	—
Trading assets	182	—	—
Loans at amortized cost	6,948	8,185	17.8%
Loans at FVTPL	—	12	—
Securities at FVOCI	—	608	—
Available-for-sale financial assets	488	—	—
Securities at amortized cost	—	404	—
Held-to-maturity financial assets	356	—	—
Other interest income	59	59	—
Total interest income	₩ 8,123	₩ 9,597	18.1%
Interest expense:			
Deposits	₩(2,411)	₩(3,007)	24.7%
Borrowings	(207)	(292)	41.1
Debt securities issued	(490)	(641)	30.8
Other interest expense	(23)	(71)	208.7
Total interest expense	₩(3,131)	₩(4,011)	28.1%
Net interest income	₩ 4,992	₩ 5,586	11.9%
Net interest margin(1)	1.75%	1.81%	

Note:

(1) The ratio of net interest income to average interest-earning assets. See "*Average Balance and Volume and Rate Analysis— Average Balance Sheet and Related Interest.*"

Interest income. Interest income increased by 18.1% to ₩9,597 billion in 2018 from ₩8,123 billion in 2017, primarily as the Bank recorded interest income on loans at amortized cost of ₩8,185 billion in 2018, compared to interest income on loans of ₩6,948 billion in 2017, largely as a result of an increase in the average balance of loans and market interest rates driven by the increase in the base interest rate set by the Bank of Korea from 1.25% to 1.50% in November 2017 and 1.50% to 1.75% in November 2018. The average balance of the Bank's loans at amortized cost increased by 7.8% to ₩241,871 billion in 2018 from ₩224,417 billion in 2017, principally due to increases in the average balances of retail loans and corporate loans as further described below.

The average lending rate on the Bank's loans increased to 3.39% in 2018 from 3.10% in 2017, principally due to an increase in the average lending rates for retail loans and corporate loans due to the increase in the base interest rate by the Bank of Korea as discussed above.

More specifically, the increase in interest income was due to the following:

- a 18.6% increase in interest on retail loans to ₩3,597 billion in 2018 from ₩3,034 billion in 2017, primarily due to a 9.1% increase in the average balance of retail loans to ₩107,631 billion in 2018 from ₩98,643 billion in 2017, as well as an increase in the average lending rate for retail loans to 3.34% in 2018 from 3.08% in 2017. The average balance of retail loans increased primarily as a result of the relatively low interest rate environment and increased demand in the housing market despite stricter regulations on maximum debt-to-income and loan-to-value ratios implemented by the Government on mortgage loans. In particular, the volume of mortgage and home equity loans increased as more households chose to purchase homes due to a continued increase in the amounts of long-term deposits required for housing rentals and a decrease in the supply of homes available for long-term deposit leases. The average lending rate for retail loans increased primarily as a result of the general increase in market interest rates largely driven by the increase in the base interest rate by the Bank of Korea as discussed above. The base rate set by the Bank of Korea largely determines the market rates for certificates of deposit, which in turn largely determines the Bank's lending rates for a substantial majority of the Bank's retail loans.

- a 17.3% increase in interest on corporate loans to ₩4,383 billion in 2018 from ₩3,736 billion in 2017, primarily due to a 7.3% increase in the average balance of corporate loans to ₩126,964 billion in 2018 from ₩118,369 billion in 2017, as well as an increase in the average lending rate for corporate loans to 3.45% in 2018 from 3.16% in 2017. The average balance of corporate loans increased principally as a result of increased loan demand from SOHOs and small- and medium-sized enterprises amidst the Government's policy initiatives to promote the growth of such enterprises. The average lending rate for corporate loans increased largely as a result of the general increase in market interest rates as described above.

Interest expense. Interest expense increased by 28.1% to ₩4,011 billion in 2018 from ₩3,131 billion in 2017 due primarily to a 24.7% increase in interest expense on deposits to ₩3,007 billion in 2018 from ₩2,411 billion in 2017 and, to a lesser extent, a 30.8% increase in interest expenses on debt securities issued to ₩641 billion in 2018 from ₩490 billion in 2017.

Interest expense on deposits increased primarily due to an increase in the average interest rate payable on deposits (the ratio of interest expense to average balance of deposits) by 17 basis points to 1.23% in 2018 from 1.06% in 2017, as well as a 7.2% increase in the average balance of deposits to ₩244,663 billion in 2018 from ₩228,334 billion in 2017. The increase in the average interest rate payable on deposits resulted mainly from an increase in the average interest rate payable on time and savings deposits to 1.35% in 2018 from 1.16% in 2017. The average interest rate payable on time and savings deposits increased largely as a result of a general increase in market interest rates reflecting the increase in the base interest rate set by the Bank of Korea. The increase in the average balance of deposits was primarily due to a 7.7% increase in the average balance of time and savings deposits to ₩200,669 billion in 2018 from ₩186,305 billion in 2017, which was largely a result of customers' preference for low-risk investments in light of the continuing uncertainty in financial markets.

Interest expense on debt securities issued increased primarily as a result of an increase in the average balance of debt securities issued to ₩27,275 billion in 2018 from ₩22,689 billion in 2017.

Net interest margin. Net interest margin represents the ratio of net interest income to the average balance of interest-earning assets. The Bank's overall net interest margin increased by 6 basis points to 1.81% in 2018 from

1.75% in 2017, largely due to the increase in net interest income described above outpacing the increase in the average volume of interest-earning assets as a result of the general increase in market interest rates largely driven by the increase in base interest rate by the Bank of Korea from 1.25% to 1.50% in November 2017 and 1.50% to 1.75% in November 2018. Net interest spread, which represents the difference between the average rate of interest earned on interest-earning assets and the average rate of interest paid on interest-bearing liabilities, increased by 4 basis points to 1.73% in 2018 from 1.69% in 2017, largely as the 25 basis point increase in the average rate of interest receivable on interest-earning assets to 3.10% in 2018 from 2.85% in 2017 exceeded the 21 basis point increase in the average rate of interest payable on interest-bearing liabilities to 1.37% in 2018 from 1.16% in 2017, which was largely attributable to the Bank of Korea's increase of the base interest rate described above, with the increase in average rate of interest receivable on interest-earning assets exceeding the increase in average rate of interest payable on interest-bearing liabilities due to the difference in average repricing frequency and relative maturity profiles. The average volume of interest-earning assets increased by 8.4% to ₩309,133 billion in 2018 from ₩285,275 billion in 2017 largely as a result of an increase in the volume of retail and corporate loans. The average volume of interest-bearing liabilities increased by 8.1% to ₩292,137 billion in 2018 from ₩270,192 billion in 2017 largely as a result of an increase in deposits, primarily driven by customers' preference for low-risk investments in light of the continuing uncertainty in financial markets and the Bank's effort to attract more low cost deposits.

Fees and Commission Income (Expense), Net

The following table shows, for the periods indicated, the principal components of the Bank's net fees and commission income.

	Year Ended December 31,		
	2017	**2018**	**% Change**
	(in billions of Won, except percentages)		
Fees and commission income:			
Credit placement fees	₩ 55	₩ 55	—%
Commission received as electronic charge receipt	142	146	2.8
Brokerage fees	108	98	(9.3)
Commission received as agency	324	324	—
Investment banking fees	54	71	31.5
Commission received in foreign exchange activities	179	189	5.6
Asset management fees from trust accounts	166	192	15.7
Guarantee fees	61	70	14.8
Others	95	113	18.9
Total fees and commission income	₩1,184	₩1,258	6.3%
Fees and commission expense:			
Credit-related fees	₩ (34)	₩ (35)	2.9%
Brand-related fees	(33)	(35)	6.1
Service-related fees	(18)	(26)	44.4
Trading and brokerages fees	(8)	(9)	12.5
Commission paid in foreign exchange activities	(32)	(39)	21.9
Others	(68)	(77)	13.2
Total fees and commission expense	₩ (193)	₩ (221)	14.5%
Net fees and commission income	₩ 991	₩1,037	4.6%

Net fees and commission increased by 4.6% to ₩1,037 billion in 2018 from ₩991 billion in 2017, primarily as a result of a 15.7% increase in asset management fees from trust accounts to ₩192 billion in 2018 from ₩166 billion in 2017 and, to a lesser extent, a 31.5% increase in investment banking fees to ₩71 billion in 2018 from ₩54 billion in 2017. Asset management fees from trust accounts increased primarily due to an increase in management fees from specified money trusts and real estate related trusts. Investment banking fees increased largely as a result of increased volume of mergers and acquisitions, social overhead capital (SOC) projects and other corporate transactions.

Non-interest Income (Expense), Net

The following table sets forth for the periods indicated the components of the Bank's net non-interest income (expense).

	Year Ended December 31,		
	2017	2018	% Change
	(in billions of Won, except percentages)		
Dividend income	₩ 101	₩ 16	(84.2)%
Gain on financial instruments at FVTPL	—	359	—
Net trading loss	(165)	—	—
Net foreign currencies transaction gain	473	142	(70.0)
Net gain on disposal of financial assets at FVOCI	—	16	—
Net gain on sale of available-for-sale financial assets	196	—	—
Provision for credit loss allowance	—	(243)	—
Net impairment loss on financial assets	(661)	—	—
General and administrative expenses	(3,118)	(3,062)	(1.8)
Other operating expenses, net	(603)	(686)	13.8
Net non-operating loss	(48)	(18)	(62.5)
Share of profit (loss) of associates	1	(1)	N/M
Total net non-interest expense	₩(3,824)	₩(3,477)	(9.1)%

N/M = not meaningful.

Net non-interest expense decreased by 9.1% to ₩3,477 billion in 2018 from ₩3,824 billion in 2017, primarily as the Bank recognized provision for credit loss allowance of ₩243 billion in 2018 compared to net impairment loss on financial assets of ₩661 billion in 2017 as well as, to a lesser extent, a result of a decrease in general and administrative expenses to ₩3,062 billion in 2018 from ₩3,118 billion in 2017, which was primarily due to a decrease in termination benefits cost.

Provision for Credit Loss Allowance and Net Impairment Loss on financial assets

The following table sets forth for the periods indicated the provision for credit loss allowance by type of financial asset.

	Year Ended December 31,		
	2017	2018	% Change
	(in billions of Won, except percentages)		
Loans:			
Retail	₩140	₩138	(1.4)%
Corporate	339	93	(72.6)
Others	5	15	200.0
Subtotal	484	246	(49.2)
Securities[1]	178	7	(96.1)
Others	(1)	(10)	900.0
Net impairment loss on financial assets / Provision for credit loss allowance	₩661	₩243	(63.2)%

Note:

(1) Consist of available-for-sale financial assets and held-to-maturity financial assets in 2017 and securities at FVOCI and securities at amortized cost in 2018.

The Bank recognized provision for credit loss allowance of ₩243 billion in 2018 compared to net impairment loss on financial assets of ₩661 billion in 2017. For loans, the Bank recognized provision for credit loss allowance for loans of ₩246 billion in 2018 compared to net impairment loss on loans of ₩484 billion in 2017. As of January 1, 2018, the Bank increased its credit loss allowance for loans by ₩363 billion, from ₩1,507 billion to ₩1,870 billion, which was a result of the measurement model being changed from the "incurred loss" model under the previous guidance to a more forward-looking "expected credit loss" model upon adopting K-IFRS 1109. The effect of such increase in credit loss allowance for loans was recorded in the Bank's retained earnings as of January 1, 2018. While the provision for credit loss allowance for loans in 2018 decreased compared to the net impairment loss on loans in 2017, which was mainly due to the reversal of impairment loss on certain corporate borrowers during 2018, credit loss allowance for loans increased to ₩1,676 billion as of December 31, 2018 under K-IFRS 1109 from ₩1,507 billion as of December 31, 2017 under the previous guidance of K-IFRS 1039. For further information on the financial impact of K-IFRS 1109 on the Bank's credit loss allowance, see "*Risk Factors — Risks Relating to the Bank's Business — The implementation of K-IFRS 1109 has caused the Bank to increase its allowance for impairment losses to cover expected credit loss on its loan portfolio and other financial instruments and may increase volatility in the Bank's profit or loss*." The Bank also recognized provision for credit loss allowance for securities of ₩7 billion in 2018 compared to net impairment loss on securities of ₩178 billion in 2017, which was principally due to impairment loss on available-for-sale equity instruments, including, a significant decline in the fair value of ₩131 billion in the Bank's investments in Kookmin Cable Investment Inc. during 2017, which was the largest portion of impairment loss on securities, no longer being subject to impairment assessment upon the implementation of K-IFRS 1109.

Income Tax Expense

Income tax expense increased by 94.0% to ₩867 billion in 2018 from ₩447 billion in 2017 primarily as a result of an increase in profit before income taxes by 45.7% to ₩3,146 billion in 2018 from ₩2,159 billion in 2017 as well as an increase in the corporate tax rate from 24.2% to 27.5% which came into effect for the fiscal year beginning on or after January 1, 2018. The Bank's effective rate of income tax increased to 27.56% in 2018 compared to 20.69% in 2017.

Profit for the Period

As a result of the foregoing, the Bank's profit for the period increased by 33.1% to ₩2,279 billion in 2018 from ₩1,712 billion in 2017.

Other Comprehensive Income (Loss) for the Period

	Year Ended December 31,		
	2017	2018	% Change
	(in billions of Won, except percentages)		
Items that are or may be reclassified subsequently to profit or loss			
Foreign currency translation differences for foreign operations	₩(186)	₩ 21	N/M
Unrealized net change in fair value of financial assets at FVOCI	—	88	—
Unrealized net change in fair value of available-for-sale financial assets	(93)	—	—
Share of other comprehensive loss of associates	(10)	(2)	(80.0)
Items that will not be reclassified subsequently to profit or loss			
Remeasurement of defined benefit plans	74	(70)	N/M
Unrealized net change in fair value of financial assets at FVOCI	—	17	—
Share of other comprehensive income of associates	0.15	0.01	(90.8)
Total other comprehensive loss, net of income tax	₩(215)	₩ 54	N/M

N/M = not meaningful.

The Bank recorded other comprehensive income of ₩54 billion in 2018 compared to other comprehensive loss of ₩215 billion in 2017. The items recognized in other comprehensive income were changed due to the adoption of K-IFRS 1109, particularly related to classification and measurement of securities. The Bank recognized gain on unrealized net change in fair value of financial assets at fair value through other comprehensive income of ₩105 billion in 2018 compared to other comprehensive loss related to available-for-sale financial assets of ₩93 billion in 2017. The Bank recognized gain on foreign currency translation differences for foreign operations of ₩21 billion in 2018 compared to loss on foreign currency translation differences for foreign operations of ₩186 billion in 2017, primarily due to a decline in foreign currency exchange rates amid stronger valuation of the Won in 2018.

Business Segment

The principal business segments of the Bank are currently as follows:

- retail banking, which primarily focuses on making loans to or receiving deposits from individual customers (including high net-worth individuals and families) and, to a lesser extent, not-for-profit institutions such as hospitals, airports and schools;

- corporate banking, which primarily focuses on making loans to or receiving deposits from for-profit corporations, including small- and medium-sized enterprises, and providing investment banking services to corporate clients;

- international banking, which primarily focuses on management of overseas subsidiaries and branch operations and other international businesses; and

- other banking, which consists of treasury business (including internal asset and liability management and other non-deposit funding activities), securities investing and trading and derivatives trading, as well as administration of the overall banking operations.

In January 2019, the Bank reclassified the SOHO segment from retail banking to corporate banking in order to streamline its credit management process. The Bank's SOHO business, previously conducted under the retail banking segment, has been transferred to the corporate segment. The Bank had previously managed loans extended to SOHOs under our retail banking segment, but as a result of this change, loans extended to SOHOs are now managed together with other corporate loans as SOHOs, although operated by individuals or households, have separate corporate entities. For further details, see Note 5 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2018 and 2019 included elsewhere in this offering circular. The segment results for 2019 reflect the changes in the segment classification as if such changes occurred on January 1, 2019, and for purposes of facilitating comparability of the segment results for 2018 and 2019, the segment results for 2018 were also adjusted to reflect the revised business segments. However, the segment results for 2017 have not been retroactively adjusted and represent the results based on the previous segment classification. Consequently, the results of the retail banking segment and corporate banking segment for 2017 may not be directly comparable to those of subsequent periods.

The following table sets forth the operating income (expense) by segment for the years ended December 31, 2017, 2018 and 2019.

	Year Ended December 31,			% Change	
	2017[1]	2018	2019	2017/2018	2018/2019
	(in billions of Won, except percentages)				
Retail banking	₩1,022	₩ 960	₩1,175	(6.1)%	22.4%
Corporate banking	1,150	1,912	2,074	66.3	8.5
International banking	421	439	473	4.3	7.7
Other banking services	(359)	(143)	(454)	(60.2)	217.5
Consolidation adjustment[2]	(28)	(3)	(5)	(89.3)	66.7
Total operating income	₩2,206	₩3,165	₩3,263	43.5%	3.1%

Notes:

(1) Results of the retail banking segment and corporate banking segment for 2017 represent the results based on the previous segment classification.

(2) Consolidation adjustment consists of adjustments for inter-segment transactions.

Retail Banking

The retail banking segment primarily consists of banking and other services provided by the Bank's retail banking branches to the branch customers, which principally consist of individuals and households. The retail banking products principally consist of mortgage and home equity loans and other retail loans, deposits and other savings products and fees earned from the sale of investment and bancassurance products.

The table below provides the income statement data for the retail banking segment for the years ended December 31, 2017, 2018 and 2019.

	Year Ended December 31,			% Change	
	2017(1)	2018	2019	2017/2018(1)	2018/2019
	(in billions of Won, except percentages)				
Net interest income	₩ 2,824	₩ 2,508	₩ 2,502	(11.2)%	(0.2)%
Net fees and commission income	495	447	447	(9.7)	—
Net other expense	(2,297)	(1,995)	(1,774)	(13.1)	(11.1)
Operating income	₩ 1,022	₩ 960	₩ 1,175	(6.1)%	22.4%

Note:

(1) Results for 2017 represent the results based on the previous segment classification.

Comparison of 2019 to 2018

Operating income for retail banking increased by 22.4% to ₩1,175 billion in 2019 from ₩960 billion in 2018.

Net interest income for retail banking decreased by 0.2% to ₩2,502 billion in 2019 from ₩2,508 billion in 2018 due to a decrease in the Bank's net interest margin which was partially offset by an increase in the average volume of retail loans to ₩117,798 billion in 2019 from ₩107,631 billion in 2018. The decrease in the Bank's net interest margin was largely due to the increase in average volume of interest-earning assets outpacing the increase in net interest income as described above. The average volume of retail loans increased largely due to an increase in home mortgage loans.

Net fees and commission income remained stable at ₩447 billion in 2019 and 2018, primarily as an increase in the overall volume of transactions was mostly offset by an increase in the proportion of online banking transactions, for which the Bank generally charges lower fees and commissions.

Net other expense decreased by 11.1% to ₩1,774 billion in 2019 from ₩1,995 billion in 2018.

Comparison of 2018 to 2017

Operating income for retail banking decreased by 6.1% to ₩960 billion in 2018 from ₩1,022 billion in 2017.

Net interest income for retail banking decreased by 11.2% to ₩2,508 billion in 2018 from ₩2,824 billion in 2017 primarily due to the segment reclassification reflected in the results for 2018 as described above, which was partially offset by an increase in the Bank's net interest margin as well as an increase in the average volume of retail loans. The increase in the Bank's net interest margin was largely due to the general increase in market interest rates. The average volume of retail loans increased largely due to an increase in home mortgage loans.

Net fees and commission income decreased by 9.7% to ₩447 billion in 2018 from ₩495 billion in 2017 primarily due to the segment reclassification reflected in the results for 2018 as described above.

Net other expense decreased by 13.1% to ₩1,995 billion in 2018 from ₩2,297 billion in 2017 primarily due to a decrease in other expense resulting from the segment reclassification reflected in the results for 2018 as described above, which was partially offset by an increase in rental expenses mainly resulting from the overall increase of rental fees in the office leasing market.

Corporate Banking

The corporate banking segment primarily consists of banking and other services provided by the Bank's corporate banking branches to their corporate customers, most of which are small- and medium-sized enterprises and large corporations, including members of the *chaebol* groups, such as general lending and providing overdrafts and other credit facilities.

The table below provides the income statement data for the corporate banking segment for the years ended December 31, 2017, 2018 and 2019.

	Year Ended December 31,			% Change	
	2017[(1)]	2018	2019	2017/2018[(1)]	2018/2019
	(in billions of Won, except percentages)				
Net interest income	₩1,418	₩2,282	₩2,353	60.9%	3.1%
Net fees and commission income	352	452	495	28.6	9.5
Net other expense	(620)	(822)	(774)	32.6	(5.8)
Operating income	₩1,150	₩1,912	₩2,074	66.3%	8.5%

Note:

(1) Results for 2017 represent the results based on the previous segment classification.

Comparison of 2019 to 2018

Operating income for corporate banking increased by 8.5% to ₩2,074 billion in 2019 from ₩1,912 billion in 2018.

Net interest income increased by 3.1% to ₩2,353 billion in 2019 from ₩2,282 billion in 2018, primarily due to a 8.5% increase in the average balance of corporate loans to ₩137,737 billion in 2019 from ₩126,964 billion in

2018, as the average lending rate for corporate loans remained stable at 3.45% in 2018 and 2019 as discussed above. The average volume of corporate loans increased largely due to an increase in facilities loans as discussed above.

Net fees and commission income increased by 9.5% to ₩495 billion in 2019 from ₩452 billion in 2018 primarily due to an increase in investment banking fees and commissions principally resulting from an increased volume of mergers and acquisitions, SOC (social overhead capital) projects and other corporate transactions.

Net other expense decreased by 5.8% to ₩774 billion in 2019 from ₩822 billion in 2018, primarily due to an increase in profit from disposal of investment securities.

Comparison of 2018 to 2017

Operating income for corporate banking increased by 66.3% to ₩1,912 billion in 2018 from ₩1,150 billion in 2017.

Net interest income increased by 60.9% to ₩2,282 billion in 2018 from ₩1,418 billion in 2017, primarily due to an increase in interest income/a decrease in interest expense resulting from the segment reclassification reflected in the results for 2018 as described above, a 7.3% increase in the average balance of corporate loans to ₩126,964 billion in 2018 from ₩118,369 billion in 2017, as well as an increase in the average lending rate for corporate loans to 3.45% in 2018 from 3.16% in 2017.

Net fees and commission income increased by 28.6% to ₩452 billion in 2018 from ₩352 billion in 2017 primarily due to an increase in fees and commission income/a decrease in fees and commission expense resulting from the segment reclassification reflected in the results for 2018 as described above, as well as an increase in investment banking fees and commissions principally resulting from an increased volume of mergers and acquisitions, SOC (social overhead capital) projects and other corporate transactions.

Net other expense increased by 32.6% to ₩822 billion in 2018 from ₩620 billion in 2017, primarily due to a decrease in interest income/an increase in interest expense resulting from the segment reclassification reflected in the results for 2018 as described above, which was partially offset by a decrease in provision for credit losses due to the adoption of K-IFRS 1109 from 2018.

International Banking

The international banking segment primarily consists of the results of operations of the Bank's overseas subsidiaries and branches such as inter-segment lending and borrowing.

The table below provides the income statement data for the international banking segment for the years ended December 31, 2017, 2018 and 2019.

	Year Ended December 31,			% Change	
	2017	2018	2019	2017/2018	2018/2019
	(in billions of Won, except percentages)				
Net interest income	₩ 463	₩ 629	₩ 746	35.9%	18.6%
Net fees and commission income	90	99	102	10.0	3.0
Net other expense	(132)	(289)	(375)	118.9	29.8
Operating income	₩ 421	₩ 439	₩ 473	4.3%	7.7%

Comparison of 2019 to 2018

Operating income for international banking increased by 7.7% to ₩473 billion in 2019 from ₩439 billion in 2018.

Net interest income increased by 18.6% to ₩746 billion in 2019 from ₩629 billion in 2018 primarily due to an increase in the average balance of loans extended by the Bank's overseas subsidiaries, especially in Vietnam.

Net fees and commission income increased by 3.0% to ₩102 billion in 2019 from ₩99 billion in 2018 primarily due to an increase in credit cards fees and commissions charged by Shinhan Bank Vietnam.

Net other expense increased by 29.8% to ₩375 billion in 2019 from ₩289 billion in 2018 primarily due to an increase in expenses resulting from expansion of the Bank's overseas network.

Comparison of 2018 to 2017

Operating income for international banking increased by 4.3% to ₩439 billion in 2018 from ₩421 billion in 2017.

Net interest income increased by 35.9% to ₩629 billion in 2018 from ₩463 billion in 2017 primarily due to an increase in the average balance of loans extended by the Bank's overseas subsidiaries, especially in Vietnam.

Net fees and commission income increased by 10.0% to ₩99 billion in 2018 from ₩90 billion in 2017 primarily due to an increase in credit cards fees and commissions charged by Shinhan Bank Vietnam.

Net other expense increased by 118.9% to ₩289 billion in 2018 from ₩132 billion in 2017 primarily due to an increase in expenses related to the expansion of the Bank's overseas network.

Other Banking Services

This segment primarily consists of the Bank's treasury business (including internal asset and liability management and other non-deposit funding activities), trading of, and investment in, debt securities and, to a lesser extent, equity securities for its own accounts, derivative trading activities, as well as managing back-office functions.

The table below provides the components of operating expense for the other banking services segment for the years ended December 31, 2017, 2018 and 2019.

	Year Ended December 31,			% Change	
	2017	2018	2019	2017/2018	2018/2019
	(in billions of Won, except percentages)				
Net interest income	₩ 290	₩ 164	₩ 267	(43.4)%	62.8%
Net fees and commission income	57	43	80	(24.6)	86.0
Net other expense	(706)	(350)	(801)	(50.4)	128.9
Operating income (expense)	₩(359)	₩(143)	₩(454)	(60.2)%	217.5%

Comparison of 2019 to 2018

Operating expense for the other banking segment increased by 217.5% to ₩454 billion in 2019 from ₩143 billion in 2018.

Net interest income increased by 62.8% to ₩267 billion in 2019 from ₩164 billion in 2018 primarily due to an increase in interest earned on assets managed by the Treasury Department.

Net fees and commission income increased by 86.0% to ₩80 billion in 2019 from ₩43 billion in 2018, primarily due to an increase in trust management fees.

Net other expense increased by 128.9% to ₩801 billion in 2019 from ₩350 billion in 2018, primarily due to a decrease in net gain on financial instruments at fair value through profit of loss by 34.8% to ₩234 billion in 2019 from ₩359 billion in 2018.

Comparison of 2018 to 2017

Operating expense for the other banking segment decreased by 60.2% to ₩143 billion in 2018 from ₩359 billion in 2017.

Net interest income decreased by 43.4% to ₩164 billion in 2018 from ₩290 billion in 2017.

Net fees and commission income decreased to ₩43 billion in 2018 from ₩57 billion in 2017, primarily due to a decrease in fees and commissions related to beneficiary certificates.

Net other expense decreased by 50.4% to ₩350 billion in 2018 from ₩706 billion in 2017, primarily as the Bank recorded net gain on financial instruments at fair value through profit or loss of ₩359 billion in 2018 compared to net trading loss of ₩165 billion in 2017, which was partially offset by a decrease in net income from foreign currency transactions gain due to the decline in foreign currency exchange rates amid stronger valuation of the Won.

Financial Condition

Assets

The following tables set forth, as of the dates indicated, the principal components of the Bank's assets.

	As of December 31,			% Change	
	2017	2018	2019	December 31, 2017/ December 31, 2018	December 31, 2018/ December 31, 2019
	(in billions of Won, except percentages)				
Cash and due from banks	₩ 18,662	₩ 13,150	₩ 24,050	(29.5)%	82.9%
Securities at fair value through profit or loss	—	15,612	18,716	—	19.9
Trading assets	11,216	—	—	—	—
Derivative assets	2,604	1,484	2,102	(43.0)	41.6
Loans at amortized cost, net	—	251,234	268,172	—	6.7
Loans at fair value through profit or loss	—	645	869	—	34.7
Loans, net	231,732	—	—	—	—
Securities at fair value through other comprehensive income	—	31,878	40,656	—	27.5
Available-for-sale financial assets	32,496	—	—	—	—
Securities at amortized cost	—	16,824	20,252	—	20.4
Held-to-maturity financial assets	14,823	—	—	—	—
Property and equipment	2,056	2,014	2,465	(2.0)	22.4
Intangible assets	300	316	656	5.3	107.6
Investment in associates	100	110	128	10.0	16.4
Investment properties	598	571	636	(4.3)	11.2
Defined benefit assets	34	—	—	—	—
Current tax assets	25	43	31	72.0	(27.9)
Deferred tax assets	407	223	243	(45.2)	9.0
Other assets	9,253	14,410	13,735	55.7	(4.7)
Assets held for sale	8	8	12	—	50.0
Total assets	₩324,314	₩348,524	₩392,723	7.5%	12.7%

Comparison of December 31, 2019 to December 31, 2018

The Bank's assets increased by 12.7% to ₩392,723 billion as of December 31, 2019 from ₩348,524 billion as of December 31, 2018, principally due to an increase in loans at amortized cost as well as, to a lesser extent, an increase in cash and due from banks and securities at fair value through other comprehensive income.

The Bank's loans at amortized cost increased by 6.7% to ₩268,172 billion as of December 31, 2019 from ₩251,234 billion as of December 31, 2018, due primarily to an increase in retail loans and, to a lesser extent an increase in corporate loans as explained above.

The Bank's cash and due from banks increased by 82.9% to ₩24,050 billion as of December 31, 2019 from ₩13,150 billion as of December 31, 2018, due primarily to an increase in reserve deposits with the Bank of Korea to account for debt securities with approaching maturities.

The Bank's securities at fair value through other comprehensive income increased by 27.5% to ₩40,656 billion as of December 31, 2019 from ₩31,878 billion as of December 31, 2018, due primarily to an increase in corporate bonds.

For further information on the Bank's assets, see "*Description of Assets and Liabilities*."

Comparison of December 31, 2018 to December 31, 2017

The Bank recorded net loans of ₩231,732 billion as of December 31, 2017. As a result of adopting K-IFRS 1109 effective on January 1, 2018, ₩231,130 billion and ₩602 billions of net loans as of December 31, 2017 were transferred to loans at net amortized cost and loans at fair value through profit or loss, respectively. The Bank's loans at net amortized cost increased by 8.9% to ₩251,234 billion as of December 31, 2018 from ₩230,764 billion as of January 1, 2018, due primarily to an increase in retail loans and corporate loans.

The Bank recorded available-for-sale financial assets of ₩32,496 billion as of December 31, 2017. As a result of adopting K-IFRS 1109 effective on January 1, 2018, ₩30,354 billion and ₩2,142 billion of available-for-sale financial assets as of December 31, 2017 were transferred to securities at fair value through other comprehensive income and securities at fair value through profit or loss, respectively. The Bank's securities at fair value through other comprehensive income increased by 5.0% to ₩31,878 billion as of December 31, 2018 from ₩30,354 billion as of January 1, 2018, due primarily to an increase in government bonds.

The Bank recorded held-to-maturity financial assets of ₩14,823 billion as of December 31, 2017. As a result of adopting K-IFRS 1109 effective on January 1, 2018, all of held-to-maturity financial assets of ₩14,823 billion as of December 31, 2017 were transferred to securities at amortized cost. The Bank's securities at amortized cost increased by 13.5% to ₩16,824 billion as of December 31, 2018 from ₩14,823 billion as of January 1, 2018 due primarily to an increase in government bonds.

For further information on a comparison between the Bank's assets as at December 31, 2018 and as at December 31, 2017, see Note 46 to the Bank's audited consolidated financial statements as of and for the year ended December 31, 2017 and 2018 included elsewhere in this offering circular.

Liabilities and Equity

The following tables set forth, as of the dates indicated, the principal components of the Bank's total liabilities.

	As of December 31,			% Change	
	2017	2018	2019	December 31, 2017/ December 31, 2018	December 31, 2018/ December 31, 2019
	(in billions of Won, except percentages)				
Deposits	₩242,654	₩257,893	₩287,615	6.3%	11.5%
Financial liabilities designated at fair value through profit or loss	—	480	508	—	5.8
Trading liabilities	435	—	—	—	—
Derivative liabilities	2,993	1,772	1,894	(40.8)	6.9
Borrowings	14,618	16,155	17,326	10.5	7.2
Debt securities issued	25,459	31,899	38,030	25.3	19.2
Defined benefit liabilities	4	71	56	1,675.0	(21.1)
Provisions	259	285	269	10.0	(5.6)
Current tax liabilities	211	319	399	51.2	25.1
Deferred tax liabilities	12	23	30	91.7	30.4
Other liabilities	15,015	15,434	20,503	2.8	32.8%
Total liabilities	₩301,660	₩324,331	₩366,630	7.5%	13.0%
Total equity	₩ 22,654	₩ 24,193	₩ 26,093	6.8%	7.9%
Total liabilities and equity	₩324,314	₩348,524	₩392,723	7.5%	12.7%

Comparison of December 31, 2019 to December 31, 2018

The Bank's total liabilities increased by 13.0% to ₩366,630 billion as of December 31, 2019 from ₩324,331 billion as of December 31, 2018, primarily due to an increase in deposits as well as, to a lesser extent, an increase in debt securities issued.

The Bank's deposits increased by 11.5% to ₩287,615 billion as of December 31, 2019 from ₩257,893 billion as of December 31, 2018, primarily due to an increase in time and savings deposits, demand deposits and certificates of deposit.

The Bank's debt securities issued increased by 19.2% to ₩38,030 billion as of December 31, 2019 from ₩31,899 billion as of December 31, 2018, primarily due to an increase in general debt securities resulting from increased funding amidst an increase in loans.

Total equity increased by 7.9% to ₩26,093 billion as of December 31, 2019 from ₩24,193 billion as of December 31, 2018, primarily due to an increase in retained earnings from profit for the year and, to a lesser extent, an increase in hybrid bonds.

Comparison of December 31, 2018 to December 31, 2017

The Bank's total liabilities increased by 7.5% to ₩324,331 billion as of December 31, 2018 from ₩301,660 billion as of December 31, 2017, primarily due to an increase in deposits and, to a lesser extent, an increase in debt securities issued.

The Bank's deposits increased by 6.3% to ₩257,893 billion as of December 31, 2018 from ₩242,654 billion as of December 31, 2017, primarily due to an increase in time and savings deposits, demand deposits, and certificates of deposit.

The Bank's debt securities issued increased by 25.3% to ₩31,899 billion as of December 31, 2018 from ₩25,459 billion as of December 31, 2017, primarily due to an increase in an increase in general debt securities.

Total equity increased by 6.8% to ₩24,193 billion as of December 31, 2018 from ₩22,654 billion as of December 31, 2017, primarily due to an increase in retained earnings from profit for the year and, to a lesser extent, a decrease in accumulated other comprehensive loss.

Liquidity and Capital Resources

The Bank is exposed to liquidity risk arising from the funding of its lending, trading and investment activities and in the management of trading positions. The goal of liquidity management is for the Bank to be able, even under adverse conditions, to meet all of its liability repayments on time and fund all investment opportunities. For an explanation of how the Bank manages its liquidity risk, see "*Risk Management — Market Risk Management — Market Risk Management for Non-trading Activities — Liquidity Risk Management*." In the Bank's opinion, the working capital is sufficient for its present requirements.

The following table sets forth the Bank's capital resources as of the dates indicated.

	As of December 31,			
	2017	2018	2019	
	(in billions of Won)			*(in millions of U.S. dollars)*
Deposits	₩242,654	₩257,893	₩287,615	US$248,415
Long-term debt	30,225	32,701	41,516	35,857
Call money	562	960	538	465
Borrowings from the Bank of Korea	2,874	2,289	2,387	2,062
Other short-term borrowings	6,417	12,125	10,955	9,462
Stockholders' equity[(1)]	8,995	9,025	9,324	8,053
Total	₩291,727	₩314,993	₩352,335	US$304,314

Note:

(1) Includes capital stock, share premium, and hybrid bonds issued.

Due to the Bank's history as a traditional commercial bank, its primary source of funding has historically been and continues to be customer deposits. Deposits amounted to ₩242,654 billion, ₩257,893 billion and ₩287,615 billion as of December 31, 2017, 2018 and 2019, respectively, which represented 83.2%, 81.9% and 81.6%, respectively, of the Bank's total funding as of such dates. Historically, except in limited circumstances, largely due to the lack of alternative investment opportunities for individuals and households in Korea, especially in light of a low interest rate environment and volatile stock market conditions, a substantial portion of such customer deposits were rolled over upon maturity, and accordingly provided a stable source of funding for the Bank. However, in the face of attractive alternative investment opportunities such as during a bullish run of the stock market, customers may transfer a significant amount of bank deposits to alternative investment products in search of higher returns, which may result in temporary difficulties in finding sufficient funding on commercial terms favorable to the Bank.

While the Bank generally has not faced, and currently is not facing, liquidity difficulties in any material respect if the Bank is unable to obtain the funding it needs on terms commercially acceptable to it for an extended period of time for reasons of Won devaluation or otherwise, the Bank may not be able to ensure its financial viability, meet regulatory requirements, implement its strategies or compete effectively.

As of December 31, 2017, 2018 and 2019, ₩5,639 billion, ₩5,645 billion and ₩6,015 billion, or 2.3%, 2.2% and 2.1%, respectively, of the Bank's total deposits in Won were deposits made by litigants in connection with legal proceedings in Korean courts. Court deposits carry interest rates which are generally lower than market rates.

In addition, the Bank obtains funding through borrowings and the issuances of debt and equity securities. The Bank's borrowings consist mainly of borrowings from financial institutions, the Government and Government-affiliated funds. Call money, which is available in both Won and foreign currencies, is obtained from the domestic call loan market, a short-term loan market for loans with maturities of less than one month. The Bank also receives from time to time capital contributions from Shinhan Financial Group. For example, in December 2008, the Bank received a capital contribution of ₩800 billion from Shinhan Financial Group to improve the Bank's capital adequacy amid concerns regarding the then-growing global credit crisis. The Bank has not received any capital contribution from Shinhan Financial Group since December 2008.

The Bank depends on long-term debt as a significant source of funding, principally in the form of corporate debt securities. Since 1999, the Bank has actively issued and continues to issue long-term debt securities with maturities of over one year in the Korean fixed-income market. The Bank has maintained the rating of AAA, the highest rating available, in the domestic fixed-income market since 1999. The Bank's interest rates on long-term debt securities are in general 20 to 30 basis points higher than the interest rates offered on its deposits. However, since long-term debt is not subject to premiums paid for deposit insurance and the Bank of Korea reserves, the funding costs on long-term debt securities are generally on par with the Bank's funding costs on deposits. In addition, the Bank may also issue long-term debt securities denominated in foreign currency in the overseas market. As of December 31, 2017, 2018 and 2019, the Bank's long-term debt (net of current portion) amounted to ₩30,225 billion, ₩32,701 billion and ₩41,516 billion, respectively, of which ₩6,357 billion, ₩7,894 billion and ₩9,872 billion, respectively, were denominated in foreign currencies, principally U.S. dollars.

Credit ratings affect the cost and other terms upon which the Bank is able to obtain funding. Domestic and international rating agencies regularly evaluate the Bank, and their ratings of the Bank's long-term debt are based on a number of factors, including the Bank's financial strength as well as conditions affecting the financial services industry generally.

Given the Bank's relatively high debt rating in the fixed-income market in Korea, the Bank believes that it will be able to obtain replacement funding through the issuance of long-term debt securities. However, there can be no assurance that the Bank will maintain its current credit ratings if, among other reasons, the global or Korean economy were to face another downturn, there are any changes in the Bank's corporate governance or the business of the Bank significantly deteriorates. The Bank's failure to maintain current credit ratings and outlooks could increase the cost of its funding, limit its access to capital markets and other borrowings, and require the Bank to post additional collateral in financial transactions, any of which could adversely affect its liquidity, net interest margins and profitability.

Secondary funding sources also include call money, borrowings from the Bank of Korea and other short- term borrowings, which amounted to ₩9,853 billion, ₩15,374 billion and ₩13,880 billion, as of December 31, 2017, 2018 and 2019, respectively, each representing 3.4%, 4.9% and 3.9%, respectively, of the Bank's total funding as of such dates.

In addition, pursuant to the Bank's liquidity risk management policies designed to ensure compliance with required capital adequacy and liquidity ratios, Shinhan Financial Group has set limits to the amount of liquidity support by it to its subsidiaries to 70% of its total stockholders' equity and the amount of liquidity support to a single subsidiary to 35% of its total stockholders' equity.

Contractual Obligations, Commitments and Guarantees

In its ordinary course business, the Bank makes certain contractual cash obligations and commitments which extend for several years. As the Bank is able to obtain liquidity and funding through various sources as described in "— *Liquidity and Capital Resources*" above, the Bank does not believe that these contractual cash obligations and commitments will have a material effect on its liquidity or capital resources.

Contractual Cash Obligations

The following table sets forth the Bank's contractual cash obligations as of December 31, 2019.

	As of December 31, 2019 Payments Due by Period(1)						
	Less than 1 Month	1-3 Months	3-6 Months	6-12 Months	1-5 Years	More than 5 Years	Total
	(in billions of Won)						
Deposits	₩146,595	₩30,679	₩37,192	₩60,083	₩14,139	₩3,551	₩292,239
Borrowings	3,883	2,851	2,430	3,395	3,836	1,214	17,609
Debt securities issued	2,360	3,310	3,845	6,420	20,403	3,903	40,241
Total	₩152,838	₩36,840	₩43,467	₩69,898	₩38,378	₩8,668	₩350,089

Note:

(1) Reflects all estimated contractual interest payments due on the Bank's interest-bearing deposits, borrowings and debt securities issued, and the estimated contractual interest payments on borrowings and debt securities that are on a floating rate basis as of December 31, 2019 were computed as if the interest rate used on the last applicable date (for example, the interest payment date for such floating rate loans immediately preceding the determination date) were the interest rate applicable throughout the remainder of the term.

Commitments and Guarantees

In the normal course of the Bank's banking activities, it makes various commitments and guarantees to meet the financing needs of its customers. Commitments and guarantees are usually in the form of, among others, commitments to extend credit, commercial letters of credit, standby letter of credit and performance guarantees. The contractual amount of these financial instruments represents the maximum possible loss amount if the counterparty draws down the commitment or the Bank should fulfill its obligation under the guarantee and the counterparty fails to perform under the contract. See "*Description of Assets and Liabilities — Credit-Related Commitments and Guarantees*", Note 40 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2017 and 2018 and Note 39 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2018 and 2019 included elsewhere in this offering circular.

The following table sets forth, on a consolidated basis, the Bank's commitments and guarantees as of December 31, 2019.

	As of December 31, 2019 Commitment Expiration by Period			
	Less than 1 Year	1-5 Years	More than 5 Years	Total
	(in billions of Won)			
Commitments to extend credit[1]	₩72,735	₩10,297	₩11,553	₩ 94,585
Commercial letters of credit[2]	2,659	100	—	2,759
Financial guarantees[3]	1,750	851	72	2,673
Performance guarantees[4]	4,727	2,461	57	7,245
Liquidity facilities to special purpose entities[5]	1,236	651	117	2,004
Acceptances[6]	200	1	—	201
Endorsed bills[7]	6,748	—	—	6,748
Others	762	57	1,757	2,576
Total	₩90,817	₩14,418	₩13,556	₩118,791

Notes:

(1) Commitments to extend credit represent unfunded portions of authorizations to extend credit in the form of loans. The commitments expire on fixed dates and a customer is required to comply with predetermined conditions to draw funds under the commitments. Commitments to extend credit, including credit lines, are in general subject to provisions that allow the Bank to withdraw such commitments in the event there are material adverse changes affecting an obligor.

(2) Commercial letters of credit are undertakings on behalf of customers authorizing third parties to draw drafts on the Bank up to a stipulated amount under specific terms and conditions. These are generally short-term and collateralized by the underlying shipments of goods to which they relate.

(3) Financial guarantees are contracts that require the Bank to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the terms of a debt instrument. Financial guarantee liabilities are recognized initially at their fair value, and the initial fair value is amortized over the life of the financial guarantee. The financial guarantee liability is subsequently carried at the higher of this amortized amount and the present value of any expected payment when a payment under the guarantee has become probable. Financial guarantees are included within other liabilities.

(4) Performance guarantees are issued to guarantee customers' tender bids on construction or similar projects or to guarantee completion of such projects in accordance with contractual terms. They are also issued to support a customer's obligation to supply products, commodities, maintenance or other services to third parties.

(5) Liquidity facilities to special purpose entities represent irrevocable commitments to provide contingent credit lines including commercial paper purchase agreements to special purpose entities for which the Bank serves as the administrator.

(6) Acceptances represent guarantees by the Bank to pay a bill of exchange drawn on a customer. The Bank expects most acceptances to be presented, but reimbursement by the customer is normally immediate.

(7) Endorsed bills represent notes transferred to third parties by the Bank. The Bank is obligated to fulfill the duty of payment if the person primarily liable does not honor the bill on the due date.

THE KOREAN BANKING INDUSTRY

Unless otherwise expressly stated, the information and statistics set out in this section are derived from publicly available information, including materials published by the FSC. No further verification has been made by the Bank or any of its affiliates or advisers.

The banking sector in Korea is composed of five specialized banks, six nationwide commercial banks, six regional commercial banks, two Internet-only banks and 36 branches of foreign banks as of December 31, 2019.

The specialized banks are organized under, or chartered by, special laws and are designed to meet the needs of specific sectors of the Korean economy in accordance with Government policy, that cannot be met by commercial banks due to limited resources or lack of profitability. The Korea Development Bank, for example, offers long-term facility investment funds to major industries in Korea, while The Export-Import Bank of Korea offers export loans and trade finance. Industrial Bank of Korea focuses on the small- and medium-sized enterprises sector while Nonghyup Bank and the National Federation of Fisheries Cooperatives support their respective industries. All of these specialized banks also provide traditional deposit products, except for The Export-Import Bank of Korea.

The commercial banks are designed to serve the general public and corporate sectors. The six nationwide banks consist of the Bank, Kookmin Bank, Woori Bank, KEB Hana Bank, Citibank Korea Inc. and Standard Chartered Bank Korea Limited. Amongst these, the Bank, Kookmin Bank and KEB Hana Bank are major banking flagships of their respective financial holding companies, established based on the Commercial Act of Korea and the Financial Holding Company Act to facilitate cross-selling opportunities between traditional banking and nonbanking operations and promoting improved resources allocation and capital efficiency.

Except for the customers of their branches in Seoul, the regional banks' main business clients are small and medium-sized companies in their regions. The regional banks are Busan Bank, Daegu Bank, Kwangju Bank, Jeonbuk Bank, Kyongnam Bank and Jeju Bank. Jeju Bank is a subsidiary of Shinhan Financial Group.

As in most countries, commercial banks in Korea may engage in a wide range of business. Their core activities include the taking of deposits, the extension of loans and discounts, remittances and collections, and foreign exchange. They also handle such business as guarantees and acceptances and own-account securities investment. Specific authorization is required for each area of non-bank business in which they engage such as the trust and credit card businesses. In addition, many commercial banks have been expanding their businesses into non-interest but fee-based businesses such as bancassurance and fund sales.

BUSINESS

Introduction

The Bank is one of the leading commercial banks in Korea in terms of total assets, revenues, profitability and capital adequacy, among others. A flagship member of Shinhan Financial Group, one of the leading financial holding companies in Korea in terms of same metrics, the Bank provides a wide range of commercial and other banking services to retail and corporate customers primarily in Korea and, to a lesser extent, in select overseas markets. The Bank is one of the largest lenders in Korea to small- and medium-sized enterprises. As of December 31, 2019, the Bank had 876 domestic branches and 14 overseas branches as well as 11 subsidiaries, each in Japan, the People's Republic of China, Hong Kong, Vietnam, the United States, Canada, Germany, Cambodia, Kazakhstan, Mexico and Indonesia.

Former Shinhan Bank was established in 1982 as the first privately funded commercial bank in Korea. Chohung Bank was established in 1897 and was the oldest financial institution in Korea. Former Shinhan Bank and Chohung Bank were merged in 2006 and the new bank was named "Shinhan Bank."

As of December 31, 2019, the total assets, net loans at amortized cost (after deducting allowance for loan losses) and deposits of the bank accounts of the Bank were ₩392,723 billion, ₩268,172 billion and ₩287,615 billion, respectively. As of December 31, 2018, the total assets, net loans at amortized cost (after deducting allowance for loan losses) and deposits of the bank accounts of the Bank were ₩348,524 billion, ₩251,234 billion and ₩257,893 billion, respectively. As of December 31, 2017, the total assets, net loans (after deducting allowance for loan losses) and deposits of the bank accounts of the Bank were ₩324,314 billion, ₩231,732 billion and ₩242,654 billion, respectively. For 2017, 2018, and 2019, the Bank's profit for the period was ₩1,712 billion, ₩2,279 billion and ₩2,329 billion, respectively.

The Bank's registration number with the Companies Registry in Korea is 110111-0012809. The Bank has its headquarters at 20, Sejong-Daero 9-Gil, Jung-Gu, Seoul, Korea, 04513.

Financial Holding Company Structure

In September 2001, former Shinhan Bank formed a financial holding company, Shinhan Financial Group, pursuant to the Financial Holding Company Act of Korea. Former Shinhan Bank's shares were exchanged for those of Shinhan Financial Group. As part of this share exchange, former Shinhan Bank also transferred its holding in Shinhan Capital Co., Ltd. to Shinhan Financial Group. Under the new structure, effective July 1, 2002, former Shinhan Bank became a wholly owned subsidiary of Shinhan Financial Group. For more information on the financial holding company structure, see "*Shinhan Financial Group*."

Strategy

At the outset of the global financial crisis of 2008-2009, the Bank strengthened its business fundamentals and focused on competitive sustainability, primarily through enhanced risk management and programs designed to heighten customer retention. The Bank believes that these proactive steps have been instrumental to its ability to successfully withstand the short-term challenges created by the crisis. However, the Bank believes that a unique mix of challenges and opportunities has arisen in the aftermath of the crisis.

While the immediate ripple effects from the global financial crisis have somewhat subsided, the global economy, and in turn the Korean economy, continues to face an environment of uncertainty marked by generally low growth among businesses and continuing volatility in global financial markets. The Bank believes that this environment has engendered negative popular sentiment against major financial service providers in general, as evidenced by "Occupy Wall Street" and similar movements in major urban centers around the world and greater calls for regulatory scrutiny and restrictions in relation to financial activities. In addition, advances in mobile and other technologies are renewing challenges for financial service providers to continually re-examine their existing business models. Combined, these developments require that the Bank continue to seek opportunities to foster customer trust, enhance the Bank's social capital and quickly adapt to the constant changes in the Bank's business environment. Accordingly, as a general strategic objective, the Bank is striving to re-create itself to meet these challenges and capitalize on opportunities presented by the new business environment through selectively identifying new growth opportunities, strengthening risk management, efficient use of resources and encouraging more personalized interaction with its customers.

More specifically, the Bank believes that the global financial crisis has engendered a new business environment with the following defining features: (i) stricter financial regulations, (ii) less tolerance for risk in financial products, (iii) demand for reduced debt levels, (iv) greater market acceptability of a business model based on stable growth even if this would result in relatively low levels of return, (v) political demand for greater social responsibility and accountability of financial institutions, and (vi) widespread recognition of the growing importance of emerging markets, particularly in Asia, in the world economy.

In order to best position itself amid the uncertainties that have arisen in the aftermath of the global financial crisis and capture future opportunities, the Bank plans to continue to increase its valued growth through innovation, diversify its revenue streams, improve its asset quality and strengthen risk management measures, maximize synergy among the subsidiaries of the Shinhan Financial Group, lock in and enlarge its customer base and strengthen its foundation to compete globally.

More specifically, the Bank's strategic priorities include the following:

Increase valued growth through innovation. The Bank is continually focused on enhancing its valued growth, which is imbedded in the Bank's culture, which places top priority on fostering innovation and creativity in its products and services. The Bank believes that innovative products and services create value for its customers and enhances its brand value. The Bank believes that such values contribute to sustaining its long-term growth and securing a stable revenue base. One of the most innovative products introduced by the Bank included the "Gold Riche gold installment", which was the first product in Korea to allow customers to invest in gold at a lower transaction cost without physical transfer of gold. In addition, the Bank has been widely recognized for its innovative services. As recent examples, in 2014 and 2015, the Bank was recognized as the "Best Asian Bank in the Channel Convergence Sector (2015)" and "Best Internet Banking Bank (2014)" by the Asian Banker. In 2014, the Bank received the "Korean Digital Management Innovation Award" from Maekyung Media Group and the Ministry of Science, ICT and Future Planning. In addition, the Bank was awarded the grand prize in the banking and financial services category at Chosun Ilbo's 2014 App World Korea Awards. In 2015, the Bank was awarded the grand prize for the fifth consecutive year in the "smart banking" category at the 2015 Consumers' Choice Awards sponsored by the Korea JoongAng Daily and was awarded the President's Awards at the Corporate Innovation Awards co-sponsored by the Korean Chamber of Commerce, the Ministry of Trade, Industry and Energy and the Korea JoongAng Daily. In addition, the Bank's "Speedup" currency exchange service was awarded the grand prize at the 2015 Excellence in New Financial Products Awards by the FSS. In 2016, the Bank's "Sunny My Car" loan service, which allows car buyers to get car loans without visiting a branch using the Sunny Bank platform on mobile devices, was awarded the 2016 Korea Innostar Innovative Product Award sponsored by the Korea Management Association. The Bank received the "Korean Innovation Frontier Award" for its new customer services and products from 2017 through 2019. In 2019, the Bank was also recognized for "Best Robo-Advisor Services" by the Asian Banker.

Diversify revenue streams through select new business opportunities. The Bank plans to selectively take advantage of new business opportunities created by regulatory changes and new industry trends. In particular, the Bank plans to (i) actively increase its market share in the retirement pension market in light of the aging population in Korea and the recent mandatory adoption of retirement pensions for Korean companies, (ii) strategically provide integrated global wealth management services to its existing and potential client base; (iii) leverage opportunities in investment banking by further integrating commercial banking and investment banking activities and (iv) bolster new business development capabilities in the "fintech", "green" and other growth industries.

Further improve asset quality and strengthen risk management measures. The Bank believes that ensuring strong asset quality through effective credit risk management is critical to maintaining stable growth and profitability and risk management will continue to be one of its key focus areas. One of the Bank's highest priorities is to improve asset quality and more effectively price its lending products to take into account inherent credit risk in its loan portfolio. To this end, the Bank plans to take maximum advantage of Shinhan Financial Group's further upgraded overall group-wide risk management system, including improvement in detection and preemption of potential problem loans and assessing and developing innovative contingency plans for global risk management. In addition, the Bank has upgraded its credit risk assessment model and data platform for its foreign branches to promote optimum growth and support the foreign branches' efforts to improve certain areas of their risk management capabilities.

Maximize synergy among subsidiaries of Shinhan Financial Group. The Bank intends to use the financial holding structure of Shinhan Financial Group to enhance its competitiveness by:

- becoming a one-stop financial services destination by offering a comprehensive range of products and services of the subsidiaries of Shinhan Financial Group to the Bank's customers;

- enabling the Bank to share customer information with other subsidiaries of Shinhan Financial Group, including Shinhan Card, the largest credit card provider in Korea, which is not otherwise permitted outside a financial holding company structure, thereby enhancing the Bank's cross-selling and risk management capabilities;

- enhancing its ability to reduce costs in areas such as back-office processing and procurement; and

- implementing overseas expansion plans and strengthening global sales and marketing capabilities in collaboration with other Shinhan Financial Group entities.

In order to support this strategy, the Bank is implementing specific initiatives including the enhancement of its group-wide integrated customer relationship management system to facilitate the sharing of customer information and the integration of various customer loyalty programs among the group of companies under Shinhan Financial Group.

Lock in and enlarge customer base. In anticipation of the likely increase in competition for customers in the Korean financial sector as a result of further economic recovery and potential further consolidation among major commercial banks in Korea, the Bank plans to take proactive measures to enhance loyalty among existing customers as well as to enlarge its high-quality, credit worthy customer base. In particular, the Bank plans to (i) instill a customer-oriented culture and standardize and improve customer management processes in all key areas of its operations, (ii) identify and target active retail customers through marketing and business strategies tailored to each customer segment, (iii) strengthen and diversify direct and indirect marketing channels to increase further interaction with customers, (iv) focus on high net worth customers by offering enhanced wealth management services, (v) offer a more diversified range of fund investment products and (vi) integrate and reinforce marketing efforts to bring in additional public and government entities as new customers.

Strengthen foundation to compete globally. To further strengthen its foundation to position itself as a leading global bank, the Bank plans to (i) build on its existing global networking relationships to establish profit centers overseas by designing ways to improve profitability and productivity, making further capital investments in overseas subsidiaries and maintaining its focus on organic growth while selectively pursuing acquisitions in markets where it is difficult to obtain local banking licenses through greenfield entry, (ii) improve competitive positioning in the core overseas target markets of the People's Republic of China, Vietnam and Indonesia, and further differentiate itself in other markets, such as the United States, Japan, India, Kazakhstan and Cambodia in which the Bank currently has a presence, and (iii) enhance support structure for global business capabilities through organizational restructuring, process improvements and recruitment of core talent.

Business Overview

The Bank's Principal Activities

The Bank takes deposits from its retail and corporate customers, which provide the Bank with funding necessary to offer a variety of banking services. The Bank provides comprehensive banking services, principally consisting of four business segments. In January 2019, the Bank reclassified the SOHO segment from retail banking to corporate banking in order to streamline its credit management process. The Bank's SOHO business, previously conducted under the retail banking segment, has been transferred to the corporate segment. The Bank had previously managed loans extended to SOHOs under our retail banking segment, but as a result of this change, loans extended to SOHOs are now managed together with other corporate loans as SOHOs, although operated by individuals or households, have separate corporate entities. For further details, see Note 5 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2018 and 2019 included elsewhere in this offering circular.

The following is a brief description of each business segment of the Bank:

- retail banking, which primarily focuses on making loans to or receiving deposits from individual customers (including high net-worth individuals and families) and, to a lesser extent, not-for-profit institutions such as hospitals, airports and schools;

- corporate banking, which primarily focuses on making loans to or receiving deposits from for-profit corporations, including small- and medium-sized enterprises, and providing investment banking services to corporate clients;

- international banking, which primarily focuses on management of overseas subsidiaries and branch operations and other international businesses; and

- other banking, which consists of treasury business (including internal asset and liability management and other non-deposit funding activities), securities investing and trading and derivatives trading, as well as administration of the overall banking operations.

The Bank's principal activities are not subject to any material seasonal trends. While the Bank has a number of overseas branches and subsidiaries, substantially all of its assets are located, and substantially all of its revenues are generated, in Korea.

Deposit-Taking Activities

The Bank offers many deposit products that target different customer segments with features tailored to each segment's financial and other profiles. The deposit products offered by the Bank consist principally of the following:

Demand deposits. Demand deposits do not accrue interest or accrue interest at a lower rate than time or savings deposits and allow the customer to deposit and withdraw funds at any time. If interest-bearing, demand deposits have interest accruing at a fixed or variable rate depending on the period and the amount of deposit. Demand deposits constituted 16.2%, 15.7% and 15.3% of the Bank's total deposits as of December 31, 2017, 2018 and 2019, respectively. Demand deposits paid average interest of 0.35%, 0.39% and 0.42% in 2017, 2018 and 2019, respectively.

Time and savings deposits. Time deposits generally require the customer to maintain a deposit for a fixed term during which the deposit accrues interest at a fixed rate or a variable rate based on certain financial indexes, including the Cost of Funds Index ("**COFIX**"). If the deposit is withdrawn prior to the end of the fixed term, the customer is paid a lower interest rate than that originally offered. The term typically ranges from one month to five years. Savings deposits allow customer to deposit and withdraw funds at any time and accrue interest at an adjustable interest rate, which is typically lower than the rate applicable to time or installment deposits. Time and savings deposits constituted 80.7%, 80.7% and 81.3% of the Bank's total deposits as of December 31, 2017, 2018 and 2019, respectively, and paid average interest of 1.16%, 1.35% and 1.45% in 2017, 2018 and 2019, respectively.

Other deposits. Other deposits consist mainly of certificates of deposit. Certificates of deposit typically have maturities from 30 days to two years. Interest rates on certificates of deposit are determined based on the length of the deposit and prevailing market interest rates. Certificates of deposit are sold at a discount to their face value, reflecting the interest payable on the certificates of deposit. Certificates of deposit constituted 3.1%, 3.6% and 3.4% of the Bank's total deposits as of December 31, 2017, 2018 and 2019, respectively, and paid average interest of 1.57%, 1.96% and 2.07% in 2017, 2018 and 2019, respectively.

The Bank also offers deposits which provide the customer with preferential rights to housing subscriptions under the Housing Law and Rules on Housing Supply (the "**Housing Law**") and eligibility for mortgage and home equity loans. As a result of an amendment to the Housing Law in June 2015, new subscriptions to housing subscription savings accounts, housing subscription time deposits accounts and housing subscription installment savings accounts became no longer available after September 1, 2015. Instead, general housing subscription savings accounts (which combine all of the functions of the aforementioned three accounts) presently remain available to all. The contribution period is from the subscription date to the date on which the account holder is selected as the purchaser of a house, and the required monthly contribution amount is from a minimum of ₩20,000 to a maximum of ₩500,000. The interests accrued on general housing subscription savings accounts are paid in lump sum upon termination of the account, and such interests shall be calculated at the interest rate determined and announced by the Ministry of Land, Infrastructure and Transport. Those who have a general housing subscription savings account and meet certain other criteria are granted a preferential subscription right for the purchase of a house. In the case of privately funded houses, the aggregate amount of contributions made to the account must be at least the applicable deposit threshold amount for the location and area of the relevant house (from ₩2 million up to ₩15 million). It is impossible to change the account holder name of a general housing subscription savings account except in the case of inheritance by the death of the original account holder. For information on the Bank's deposits in Won based on the principal types of deposit products the Bank offers, see "*Description of Assets and Liabilities — Funding — Deposits*."

The rate of interest payable on the Bank's deposit products may vary significantly, depending on average funding costs, the rate of return on its interest-earning assets, prevailing market interest rates among financial institutions and other major financial indicators.

The Bank also offers court deposit services for litigants in Korean courts, which involve providing effectively an escrow service for litigants involved in certain types of legal or other proceedings. Chohung Bank historically was a dominant provider of such services since 1958, and following the Bank's acquisition of Chohung Bank, the Bank continues to hold a dominant market share in these services. Such deposits typically carry interest rates lower than the market rates (by approximately 0.5% per annum) and amounted to ₩5,639 billion, ₩5,645 billion and ₩6,015 billion as of December 31, 2017, 2018 and 2019, respectively.

The Monetary Policy Committee of the Bank of Korea imposes a reserve requirement on Won currency deposits at commercial banks at rates ranging from 0% to 7%, based generally on maturity and the type of deposit instrument. See "*Supervision and Regulation — Principal Regulations Applicable to Banks — Liquidity*."

The Depositor Protection Act provides for a deposit insurance system under which the Korea Deposit Insurance Corporation guarantees repayment of eligible bank deposits to depositors up to ₩50 million per depositor and ₩50 million per insured under the defined contribution retirement pension per bank. See "*Supervision and Regulation — Principal Regulations Applicable to Banks — Deposit Insurance System*."

Retail Banking Services

Overview

Retail banking services include mortgage and home equity lending and retail lending as well as demand, savings and fixed deposit-taking, checking account services, electronic banking and automatic teller machines ("**ATM**") services, bill paying services, payroll and check-cashing services, currency exchange and wire fund transfer. The Bank believes that providing modern and efficient retail banking services is important to maintaining its public profile and as a source of fee-based income. Accordingly, the Bank believes that its retail banking services and products will become increasingly important in the coming years as the domestic banking sector further develops and becomes more complex.

Retail banking has been and will continue to remain one of the Bank's core businesses. The Bank's strategy in retail banking is to provide prompt and comprehensive services to retail customers through increased automation and improved customer service, as well as a streamlined branch network focused on sales. The retail segment places an emphasis on targeting high net worth individuals. The retail loans of the Bank before allowance for loan losses and deferred loan origination costs and fees amounted to ₩123,372 billion as of December 31, 2019.

Retail Lending Activities

The Bank offers various retail loan products, consisting principally of loans to individuals and households. The Bank's retail loans products target different segments of the population with features tailored to each segment's financial profile and other characteristics, including customer's occupation, age, loan purpose, collateral requirements and the duration of the customer's relationship with the Bank. Retail loans consist principally of the following:

Mortgage and home equity loans, which are mostly comprised of mortgage loans that are used to finance home purchases and are generally secured by the housing unit being purchased; and

Other retail loans, which are loans made to customers for any purpose other than mortgage and home equity loans and the terms of which vary based primarily upon the characteristics of the borrower and which are either unsecured or secured or guaranteed by deposits or by a third party. Other retail loans also include advance loans extended on an unsecured basis to retail borrowers the use of proceeds for which is restricted to financing of home purchases prior to the completion of the construction.

As of December 31, 2019, the Bank's mortgage and home equity loans and other retail loans accounted for 54.5% and 45.5% of the Bank's total retail loans, respectively.

For secured loans, the Bank's policy is to lend up to 40% to 100% of the appraisal value of the collateral, after taking into account the value of any lien or other security interest that has priority over its security interest (other than petty claims). For mortgage and home equity loans, the Bank's general policy is to lend up to 45% to 82% of the appraisal value of the collateral, but subject to the maximum loan-to-value ratio, debt-to-income ratio and debt service ratio requirements for mortgage loans implemented by the Government. The loan-to-value ratio of secured loans, including mortgage and home equity loans, is updated on a monthly basis using the most recent appraisal value of the collateral, and maximum loan-to-value ratios are further adjusted based on factors such as the location of the secured property, nature and purpose of the loans and level of competition in the market. Since January 11, 2019, maximum loan-to-value ratios are determined and may be adjusted in increments of 1% (as opposed to increments of 5%, which was the case prior to January 11, 2019), allowing the Bank to set more precise and tailored maximum loan-to-value ratios for its secured loans.

As of December 31, 2019, the loan-to-value ratio of mortgage and home equity loans of the Bank was 49.6%. As of December 31, 2019, substantially all of its mortgage and home equity loans were secured by residential property.

Under the administrative instructions of the FSC and the FSS effective August 1, 2014 (which have been extended and amended several times, but have been replaced by the Regulation on the Supervision of the Banking Business and the Detailed Regulation on the Supervision of the Banking Business reflecting the tightened measures as discussed below), the Bank was subject to, when extending mortgage and home equity loans, to the maximum loan-to-value ratio of 70% (irrespective of the location of the property, subject to certain exceptions) and the maximum debt-to-income ratio of 60% (only in respect of apartment units located in the greater Seoul metropolitan area, subject to certain exceptions).

On January 31, 2018, the existing debt-to-income requirement was replaced by the new debt-to-income ratio requirement, which reflects (i) both principal and interest payments on the applicable mortgage and home equity loan and existing mortgage and home equity loans and (ii) interest payments on other loans. The previous debt-to-income requirement had only reflected (i) both principal and interest payments on the applicable mortgage and home equity loan and (ii) interest payments on existing mortgage and home equity loans.

Since June 2017, the Government led by President Moon Jae-in has announced and implemented a series of robust polices aimed at taming speculation and deterring the rise of housing prices including, among others, the designation of "speculative districts" (comprised of fifteen districts in Seoul and Sejong Special Self-Governing City as of February 21, 2020), "overheated speculative districts" (comprised of Seoul, Gwacheon City, Bundang District in Seongnam City, Gwangmyeong City, Hanam City respectively in Gyeonggi Province, Suseong District in Daegu Metropolitan City and Sejong Special Self-Governing City as of February 21, 2020) and "adjustment targeted areas" (comprised of Seoul, 25 cities, districts or other areas in Gyeonggi Province and Sejong Special Self-Governing City as of February 21, 2020) (the "speculative districts", "overheated speculative districts" and "adjustment targeted areas" are hereinafter referred to as the "regulated areas"), and the application of reduced loan-to-value ratios and debt-to-income ratios to those buying homes in the regulated areas.

For example, recently, on December 16, 2019, the Government unveiled a tighter set of measures aimed at the housing market. According to these new measures, which became effective from December 17, 2019, no mortgage or home equity loans can be provided to purchase a new home located in any of the regulated areas to a household that already owns two or more housing units. For a household that already owns one housing unit, such loans can only be provided under very limited circumstances. Furthermore, the "speculative districts" and "overheated speculative districts" are further restricted by tighter loan-to-value ratios. If the market value of a home located in any of the "speculative districts" or "overheated speculative districts" being acquired is greater than ₩1.5 billion, no mortgage or home equity loans may be provided. For homes located in any of the "speculative districts" or "overheated speculative districts" with a market value equal or less than ₩1.5 billion but greater than ₩900 million, the loans can only cover 40% of the market value up to ₩900 million and 20% of any remaining value between ₩1.5 billion and ₩900 million. In addition to the foregoing restrictions, no mortgage loan applicant buying a home in any of the "speculative districts" or "overheated speculative districts" may incur a loan that will exceed 40% of his/her debt service ratio for homes with market values exceeding ₩900 million. Furthermore, on February 20, 2020, the Government announced additional countermeasures to curb housing prices in the "adjustment targeted areas", under which if the market value of a home located in any of the "adjustment targeted areas" being acquired is greater than ₩900 million, the loans can only cover 50% of the market value up to ₩900 million and 30% of any remaining value exceeding ₩900 million. These renewed measures are expected to lead to a decline in the overall volume of home mortgage loans but may result in an increase in long-term deposit loans required for house rentals and lending to borrowers with high credit profiles.

In addition, the supervising authorities in Korea from time to time issue administrative instructions to Korean banks, which have the effect of regulating the access of borrowers to housing loans and, as such, demand for real estate properties. For example, the FSS issued administrative instructions to financial institutions to (except in limited circumstances) verify the borrower's ability to repay based on proof of income prior to making a mortgage and home equity loan regardless of the type or value of the collateral or the location of the property, which has had the effect of practically barring the grant of any new mortgage and home equity loans to borrowers without verifiable income.

The Bank extends mortgage and home equity loans in compliance with the applicable regulations and administrative instructions by the relevant supervising authorities.

The following tables set forth a breakdown of the Bank's retail loans (before allowance for loan losses and deferred loan origination costs and fees).

	As of December 31,		
	2017	2018	2019
	(in billions of Won, except percentages)		
Retail loans[(1)]			
Mortgage and home equity loans	₩58,252	₩61,614	₩67,284
Other retail loans	45,472	51,084	56,088
Percentage of retail loans to total gross loans	44.6%	44.5%	45.7%

Note:

(1) Before allowance for loan losses.

The Bank's total mortgage and home equity loans amounted to ₩67,284 billion as of December 31, 2019, and as of such date, consisted of amortizing loans (whose principal is repaid by part of the installment payments) in the amount of ₩47,031 billion and non-amortizing loans in the amount of ₩20,253 billion. In addition, as of December 31, 2019, the Bank also provided lines of credit in the aggregate outstanding amount of ₩905 billion for non-amortizing loans.

Pricing

The interest rates payable on the Bank's retail loans are either periodically adjusted floating rates (based on a base rate determined for three-month, six-month or twelve-month periods derived using an internal transfer price system, which reflects the market cost of funding, as adjusted to account for expenses related to lending and the profit margin of the relevant loan products) or fixed rates that reflect the market cost of funding, as adjusted to account for expenses related to lending and the profit margin. Fixed rate loans are offered only on a limited basis and at a premium to floating rate loans. For unsecured loans, which the Bank provides on a floating or fixed rate basis, interest rates thereon reflect a margin based on, among other things, the borrower's credit score as determined during its loan approval process. For secured loans, the credit limit is based on the type of collateral, priority with respect to the collateral and the loan-to-value ratio. The Bank may adjust the pricing of these loans to reflect the borrower's current and/or expected future contribution to the Bank's profitability. The interest rate on the Bank's loan products may become adjusted at the time the loan is extended. If a loan is repaid within three years following the date of the loan, the borrower is required to pay an early repayment fee, which is typically 0.7% to 1.4%, depending on types of loans and applicable interest rates, of the outstanding principal amount of and accrued and unpaid interest on the loan, multiplied by a fraction the numerator of which is the number of the remaining days on the loan until maturity and the denominator of which is the number of days comprising the term of the loan or three years, whichever is greater.

As of December 31, 2019, the Bank's three-month, six-month and twelve-month base rates were 1.53%, 1.52% and 1.51%, respectively. As of December 31, 2019, the Bank's fixed rates for mortgage and home equity loans with a maturity of five years was 2.85%. The Bank's fixed rates for other retail loans with a maturity of one year ranged from 2.41% to 14.00%, depending on the credit scores of its customers.

As of December 31, 2019, 92.4% of the Bank's total retail loans were floating rate loans and 7.6% were fixed rate loans. As of the same date, 92.9% of the Bank's retail loans with maturity of more than one year were floating rate loans and 7.1% were fixed rate loans.

The interest rate charged to customers by the Bank is based, in part, on the "cost of funds index", or COFIX, which is published by the Korean Federation of Banks. COFIX is computed based on the weighted average interest of select funding products (including time deposits, housing and other installment savings deposits, repos, discounted bills and senior non-convertible financial debentures) of eight major Korean banks (comprised of the Bank, Kookmin Bank, Woori Bank, KEB Hana Bank, Nonghyup Bank, Industrial Bank of Korea, Citibank Korea Inc. and Standard Chartered Bank Korea Limited). Each bank then independently determines the interest rate applicable to its respective customers by adding a spread to the COFIX based on the difference between the COFIX and such bank's general funding costs, administration fees, the customer's credit score, the maturity of the loan and other customer-specific premiums and discounts based on the customer relationship with such bank. These interest rates are typically adjusted on a monthly basis. In January 2019, the FSC announced plans to reflect rates for short term deposits such as demand deposits when computing the "cost of funds index," or COFIX, which is expected to result in lower interest rates for household loans compared to the previous COFIX rate.

Private Banking

Historically, the Bank has focused on customers with high net worth. The Bank's retail banking services include providing private banking services to high net worth customers who seek personal advice in complex financial matters. The Bank's aim in private banking is to help enhance wealth accumulation by, and increase the financial sophistication of its high net-worth clients by offering them customized wealth management solutions and comprehensive financial services including asset portfolio and fund management, tax consulting, real estate management and family office services, among others. Since the end of 2011, in order to preemptively respond to evolving customer needs and promote asset growth by inducing greater synergy between commercial banking and investment advisory services offered by Shinhan Investment Corp., the Bank launched the private wealth management centers which combine certain branches of the Bank with those of Shinhan Investment Corp. located in the same area. The Bank's strength in private banking has been widely recognized by a number of significant industry awards in recent years, including the grand prize at the Premium Brand Index by Korean Standards Association, Chosun Ilbo and Ministry of Trade, Industry and Energy (awarded 12 consecutive years), the Korea Prestige Brand Award by the Korea Economic Daily (awarded four consecutive years), the Star Brand Award by Maekyung Media Group (awarded three consecutive years), National Brand Award by Chosun Ilbo (awarded two consecutive years) in 2019.

As of December 31, 2019, the Bank operated 27 private wealth management service centers nationwide, including 18 in Seoul, three in the suburbs of Seoul and six in cities located in other regions in Korea. As of December 31, 2019, the Bank had approximately 15,677 private banking customers, who typically are required to have ₩500 million in deposits with the Bank to qualify for its private banking services.

Corporate Banking Services

Overview

The Bank provides corporate banking services to small- and medium-sized enterprises, including enterprises known as SOHO (standing for "small office, home office"), which are small enterprises operated by individuals or households, and, to a lesser extent, to large corporations, including corporations that are affiliated with *chaebol*s. The Bank also lends to government-controlled enterprises.

The following table set forth the balances and percentage of the Bank's total loans (before allowance for loan losses and deferred loan origination costs and fees) attributable to each category of its corporate lending business as of the dates indicated.

	As of December 31,					
	2017		2018		2019	
	(in billions of Won, except percentages)					
Small- and medium-sized enterprises loans[(1)]	₩ 78,556	33.7%	₩ 84,972	33.6%	₩ 91,162	33.8%
Large corporate loans[(2)]	50,532	21.7%	55,389	21.9%	55,537	20.5%
Total corporate loans	₩129,088	55.4%	₩140,361	55.5%	₩146,699	54.3%

Notes:

(1) Represents the principal amount of loans extended to corporations meeting the definition of small- and medium-sized enterprises under the Basic Act on Small- and Medium-sized Enterprises and its Presidential Decree.

(2) Includes loans to public and other, and loans to banks.

Small- and Medium-sized Enterprises Banking

Under the Basic Act on Small- and Medium-sized Enterprises (the "SME Basic Act") and the related Presidential Decree, as amended and effective from January 27, 2016, in order to qualify as a small- and medium-sized enterprise, (i) the enterprise's total assets at the end of the immediately preceding fiscal year must be less than ₩500 billion, (ii) the enterprise must meet the standards prescribed by the Presidential Decree in relation to the average and total annual sales revenues applicable to the type of its main business, and (iii) the enterprise must meet the standards of management independence from ownership as prescribed by the Presidential Decree, including non-membership in a conglomerate as defined in the Monopoly Regulations and Fair Trade Act. Pursuant to an amendment to the SME Basic Act, which will become effective in June 2020, an enterprise shall not qualify as a small- and medium-sized enterprise if it is incorporated into, or is deemed to be incorporated into a business group subject to disclosure under the Monopoly Regulations and Fair Trade Act. Non-profit enterprises that satisfy certain requirements prescribed in the SME Basic Act and its Presidential Decree may qualify as a small- and medium-sized enterprise. Furthermore, cooperatives and federations of cooperatives as prescribed by the Presidential Decree are deemed as small- and medium-sized enterprises, effective from April 15, 2014. As of December 31, 2019, the Bank made loans to 307,705 small- and medium-sized enterprises for an aggregate amount of ₩91,162 billion (before allowance for loan losses and deferred loan origination costs and fees).

The Bank, whose traditional focus has been on small- and medium-sized enterprises lending, believes that it is well-positioned to succeed in the small- and medium-sized enterprises market in light of its marketing capabilities (which the Bank believes have provided the Bank with significant customer loyalty) and its prudent risk management practices, including conservative credit rating systems for credit approval. To maintain or increase its market share of small- and medium-sized enterprises lending, the Bank:

- *has accumulated a market-leading expertise and familiarity as to customers and products*. The Bank believes that it has an in-depth understanding of the credit risks embedded in this market segment, allowing it to develop loan and other products specifically tailored to the needs of this market segment;

- *operates a relationship management system to provide customer services that are tailored to small-and medium-sized enterprises*. The Bank currently has relationship management teams in 182 banking branches, of which 51 are corporate banking branches and 131 are hybrid banking branches designed to serve both retail customers and, to a limited extent, corporate customers. These relationship management teams market products, and review and approve smaller loans with less credit risks; and

- *continues to focus on cross-selling loan products with other products*. For example, when the Bank lends to small- and medium-sized enterprises, it also explores opportunities to cross-sell retail loans or deposit products to the employees of these enterprises or to provide financial advisory services.

Large Corporate Banking

Large corporate customers consist primarily of member companies of *chaebol*s and financial institutions. Large corporate loans of the Bank amounted to ₩55,537 billion (before allowance for loan losses and deferred loan origination costs and fees) as of December 31, 2019. Large corporate customers tend to have better credit profiles than small- and medium-sized enterprises, and accordingly, the Bank has expanded its focus on these customers as part of its risk management policy.

The Bank aims to be a one-stop financial solution provider that also partners with its corporate clients in their corporate expansion and growth endeavors. To that end, the Bank provides a wide range of corporate banking services, including investment banking, real estate financing, overseas real estate project financing, large development project financing, infrastructure financing, structured financing, equity investments/venture investments, mergers and acquisitions consulting, securitization and derivatives services, including securities and derivative products and foreign exchange trading. The Bank, through Shinhan Asia Limited, a subsidiary in Hong Kong, also arranges financing for, and offers consulting services to, Korean companies expanding their business overseas, particularly in Asia.

Electronic Corporate Banking

The Bank offers to corporate customers a web-based total cash management service known as "Shinhan Bizbank." Shinhan Bizbank supports substantially all types of banking transactions ranging from basic transaction history inquiries and fund transfers to opening letters of credit, trade finance, payment management, collection management, sales settlement service, acquisition settlement service, business-to-business settlement service, sweeping, pooling, ERP interface service, host-to-host banking solutions, SWIFT SCORE service and global cash and liquidity management service. In addition, the Bank provides customers with integrated and advanced access to its financial services through its "Inside Bank" program, which combines Internet banking, capital management services and enterprise resource planning to better serve corporate customers. The Inside Bank program also seeks to provide customized financial services to meet the comprehensive needs of target corporate customers ranging from conglomerates to small enterprises in various industries, with the goal of enhancing convenience to the Bank's corporate customers in accessing its financial services as well as assisting them to strategically manage their funds. In line with the Bank's efforts to facilitate non-face-to-face online transactions for corporate transactions, in 2018, the Bank upgraded its virtual account-based corporate fund management service, known as "Shinhan Damoa Service", making it available on mobile channels. In addition, the Bank has made the fund transfers via phone number service (allowing customers to make fund transfers without the recipients' account number), which was previously only available for personal banking customers, available for corporate banking customers as well. As part of the Bank's effort to lower settlement fees for small business owners, in May 2019, the Bank launched "ZeroPay Biz Shinhan", an account-based mobile payment service enabling vendors to easily receive payments from customers' accounts by scanning the vendor's QR code with a smartphone.

Corporate Lending Activities

The Bank's principal loan products for corporate customers are working capital loans and facilities loans. Working capital loans, which include discounted notes and trade financing, are generally loans used for general working capital purposes. Facilities loans are provided to finance the purchase of equipment and construction of manufacturing plants. As of December 31, 2019, working capital loans and facilities loans amounted to ₩56,074 billion and ₩56,534 billion, respectively, representing 48.2% and 48.6% of our total Won-denominated corporate loans. Working capital loans generally have a maturity of one year, but may be extended on an annual basis for an aggregate term of three years in the case of unsecured loans and five years in the case of secured loans. Facilities loans have a maximum maturity of 15 years, are typically repaid in semiannual installments per annum and may be entitled to a grace period not exceeding one-third of the loan term with respect to the first repayment; facilities loans with a term of three years or less may be paid in full at maturity.

Loans to corporations may be unsecured or secured by real estate, deposits or guaranty certificates. As of December 31, 2019, secured loans and guaranteed loans (including loans secured by guaranty certificates issued by credit guarantee insurance funds) accounted for 62.6% and 12.7%, respectively, of our Won-denominated loans to small- and medium-sized enterprises. As of December 31, 2019, 54.9% of the corporate loans were secured by real estate.

When evaluating whether to extend loans to corporate customers, the Bank reviews their creditworthiness, credit score, value of any collateral and/or third party guarantee. The value of collateral is computed using a formula that takes into account the appraised value of the collateral, any prior liens or other claims against the collateral and an adjustment factor based on a number of considerations including, with respect to property, the average value of any nearby property sold in a court-supervised auction during the previous year. The Bank revalues collateral when a secured loan is renewed or if a trigger event occurs with respect to the loan in question.

Pricing

The Bank determines the price for its corporate loan products based principally on their respective cost of funding and the expected loss rate based on the borrower's credit risk. As of December 31, 2019, 54.4% of the Bank's corporate loans with outstanding maturities of one year or more had variable interest rates as determined by the applicable market rates.

More specifically, interest rates on the Bank's corporate loans are generally determined as follows:

Interest rate = (The Bank's periodic market floating rate or reference rate) *plus* transaction cost *plus* credit spread *plus* risk premium *plus or minus* discretionary adjustment.

Depending on market conditions and the agreement with the borrower, the Bank may use either its periodic market floating rate or the reference rate as the base rate in determining the interest rate for the borrower. As of December 31, 2019, the Bank's periodic market floating rates (which are based on a base rate determined for a three-month, six-month, one-year, two-year, three-year or five-year period, as applicable, as derived using the Bank's market rate system) were 1.52% for three months, 1.51% for six months, 1.51% for one year, 1.52% for two years, 1.58% for three years and 1.67% for five years. As of the same date, the Bank's reference rate was 4.75%. The reference rate refers to the base lending rate used by the Bank and is determined annually by the Bank's Asset & Liability Management Committee based on, among others, the Bank's funding costs, cost efficiency ratio and discretionary margin.

Transaction cost reflects the standardized transaction cost assigned to each loan product and other miscellaneous costs, including contributions to the Credit Guarantee Fund, and education taxes. The Credit Guarantee Fund is a statutorily created entity that provides credit guarantees to loans made by commercial banks and is funded by mandatory contributions from commercial banks in the amount of approximately 0.23% of all loans (excluding certain loans such as facilities loans) made by them.

The credit spread is added to the periodic floating rate to reflect the expected loss based on the borrower's credit rating and the value of any collateral or payment guarantee. In addition, the Bank adds a risk premium which takes into account the potential of unexpected loss that may exceed the expected loss from the credit rating assigned to a particular borrower.

A discretionary adjustment rate is added or subtracted to reflect the borrower's current and/or future contribution to the Bank's profitability. If additional credit is provided by way of a guarantee, the adjustment rate is subtracted to reflect such change in the credit spread. In addition, depending on the price and other terms set by competing banks for similar borrowers, the Bank may reduce the interest rate to compete more effectively with other banks.

International Business

The Bank also engages in treasury and investment activities in international capital markets, principally including foreign currency-denominated securities trading, foreign exchange trading and services, trade-related financial services, international factoring services and foreign banking operations through its overseas branches and subsidiaries. The Bank aims to become a leading bank in Asia and expand its international business by focusing on further bolstering its overseas network, localizing its overseas operations and diversifying its product offerings, particularly in terms of asset management, in order to meet the various financing needs of its current and potential customers overseas. *See* "*Business — Distribution Network — Overseas Services Network*."

Other Banking Services

Overview

Other banking businesses carried on by the Bank include treasury business (including internal asset and liability management and other non-deposit funding activities), trading of, and investment in, debt securities and, to a lesser extent, equity securities for its own accounts, derivative trading activities, as well as managing back-office functions.

Treasury

The Bank's treasury division provides funds to all of the Bank's business operations and ensures the liquidity of its operation. To secure stable long-term funds, the Bank uses fixed and floating rate notes, debentures, structured financing and other advanced funding methods. As for overseas funding, the Bank closely monitors the feasibility of raising funds in currencies other than the U.S. dollar, such as the Yen and the Euro. In addition, the Bank makes call loans and borrows call money in the short-term money market. Call loans are short-term lending among banks and financial institutions in either Won or foreign currencies with a minimum transaction amount of ₩100 million and maturities of typically one day.

Securities Investment and Trading

The Bank invests in and trades securities for its own accounts in order to maintain adequate sources of liquidity and to generate interest income, dividend income and capital gains. The Bank's trading and investment portfolios consist primarily of Korean treasury securities and debt securities issued by Government agencies, local governments or certain government-invested enterprises, debt securities issued by financial institutions and equity securities listed on the KRX KOSPI Market and KRX KOSDAQ Market of the Korea Exchange. For a detailed description of the Bank's securities investment portfolio, see "*Description of Assets and Liabilities — Investment Portfolio*."

Derivatives Trading

The Bank provides to its customers, and to a limited extent trades for its proprietary accounts, a range of derivatives products, which include:

- interest rate swaps, options, and futures relating to Won interest rate risks and LIBOR risks, respectively;

- cross-currency swaps, largely for Won against U.S. dollars, Yen and Euros;
- equity and equity-linked options;
- foreign currency forwards, options and swaps;
- commodity forwards, swaps and options;
- credit derivatives; and
- KOSPI 200 indexed equity options.

The Bank's outstanding derivatives commitments in terms of notional amount were ₩183,457 billion, ₩233,655 billion and ₩246,982 billion, in 2017, 2018 and 2019, respectively. Such derivative operations generally focus on addressing the needs of the Bank's corporate clients to enter into derivatives contracts to hedge their risk exposure, and entering into back-to-back derivatives to hedge the Bank's risk exposure that results from such client contracts.

The Bank also enters into derivative contracts to hedge the interest rate and foreign currency risk exposures that arise from the Bank's own assets and liabilities. In addition, to a limited extent, the Bank engages in the proprietary trading of derivatives within its regulated open position limits. See "*Description of Assets and Liabilities — Derivatives*."

Trust Account Management Services

Overview

The Bank's trust account management services involve management of trust accounts, primarily in the form of money trusts. Trust account customers are typically individuals seeking higher rates of return than those offered by bank account deposits. Because deposit reserve requirements do not apply to deposits held in trust accounts as opposed to deposits held in bank accounts, and regulations governing trust accounts tend to be less strict, the Bank is generally able to offer higher rates of return on trust account products than on bank deposit products. However, in recent years, due to the ongoing low interest environment, the Bank has not been able to offer attractive rates of return on its trust account products.

Trust account products generally require higher minimum deposit amounts than those required by comparable bank account deposit products. Unlike bank deposit products, deposits in trust accounts are invested primarily in securities (consisting principally of debt securities and beneficiary certificate for real estate financing) and, to a lesser extent, in loans, as the relative shortage of funding sources require that trust accounts be invested in a higher percentage of liquid assets.

Under the Banking Act, the FSCMA and the Trust Act, assets in trust accounts are required to be segregated from other assets of the trustee bank and are unavailable to satisfy the claims of the depositors or other creditors of such bank. Accordingly, trust accounts that are not guaranteed as to principal (or as to both principal and interest) are accounted for and reported separately from the bank accounts. See "*Supervision and Regulation*." Trust accounts are regulated by the Trust Act and the FSCMA, and most national commercial banks offer similar trust account products. The Bank earns income from trust account management services, which is recorded as net trust management fees.

As of December 31, 2017, 2018 and 2019, the Bank had total trust assets of ₩58,536 billion, ₩76,161 billion and ₩93,127 billion, respectively, comprised principally of securities investments of ₩16,870 billion, ₩22,479 billion and ₩23,902 billion, respectively; real property investments of ₩12,053 billion, ₩14,154 billion and ₩13,493 billion, respectively; and loans with an aggregate principal amount of ₩469 billion, ₩528 billion and ₩415 billion, respectively. Securities investments consisted of corporate bonds, government-related bonds and other securities, primarily commercial paper. As of December 31, 2017, 2018 and 2019, debt securities accounted for 27.3%, 28.5% and 24.9%, respectively, and equity securities constituted 1.5%, 1.1% and 0.8%, respectively, of the Bank's total trust assets. Loans made by trust accounts are similar in type to those made by bank accounts, except that they are made only in Won. As of December 31, 2017, 2018 and 2019, 57.1%, 57.8% and 62.7%, respectively, of the amount of loans from the trust accounts were collateralized or guaranteed. In making investment from funds received for each trust account, each trust product maintains investment guidelines applicable to each such product which set forth, among other things, company-, industry- and security-specific limitations.

Trust Products

In Korea, trust products typically take the form of money trusts, which are discretionary trusts over which (except in the case of a specified money trust) the trustees have investment discretion subject to applicable law and is commingled and managed jointly for each type of trust account. The specified money trusts are established on behalf of customers who give specific directions as to how their trust assets should be invested.

Money trusts managed by the Bank's trust account business amounted to ₩37,700 billion, ₩44,290 billion and ₩49,695 billion as of December 31, 2017, 2018 and 2019, respectively.

The Bank offers variable rate trust products through its retail branch network. As of December 31, 2017, 2018 and 2019, the Bank's variable rate trust accounts amounted to ₩33,720 billion, ₩40,270 billion and ₩45,627 billion, respectively, of which principal guaranteed variable rate trust accounts amounted to ₩3,979 billion, ₩4,019 billion and ₩4,067 billion, respectively. Variable rate trust accounts offer their holders variable rates of return on the principal amount of the deposits in the trust accounts and do not offer a guaranteed return on the principal of deposits, except in the limited cases of principal guaranteed variable rate trust accounts, for which payment of the principal amount is guaranteed. The Bank charges a lump sum or a fixed percentage of the assets held in such trusts as a management fee, and, depending on the trust products, is also entitled to additional fees in the event of early termination of the trusts by the customer. Korean banks, including the Bank, are currently allowed to guarantee the principal of the following types of variable rate trust account products: (i) existing individual pension trusts, (ii) new individual pension trusts, (iii) existing retirement pension trusts, (iv) new retirement pension trusts, (v) pension trusts and (vi) employee retirement benefit trusts. The Bank also offers an insignificant amount of guaranteed fixed rate trust products (amounting to ₩1.0 billion, ₩1.0 billion and ₩1.0 billion as of December 31, 2017, 2018 and 2019, respectively), which provide to its holders a guaranteed return of the principal as well as a guaranteed fixed rate of return. These products are carry-overs from past offerings, and the Bank no longer offers guaranteed fixed rate trust products.

Distribution Network

The Bank offers a wide range of financial services to retail and corporate customers through a variety of distribution networks and channels, including an extensive domestic branch network specializing in retail and corporate banking services, as complemented by self-service terminals and electronic banking (including mobile phone banking), as well as an overseas services network.

Branch Network in Korea

As of December 31, 2019, the Bank's branch network in Korea comprised of 876 service centers, consisting of 681 retail banking service centers (including 27 private wealth management service centers and 139 retail offices), 13 large corporate banking service centers, 51 corporate banking services centers and 131 hybrid banking branches. The following table presents the geographical distribution of the Bank's distribution network in Korea based on the branch offices and other distribution channels, as of December 31, 2019.

	Retail	Corporate	Total
Seoul metropolitan area	293	70	363
Gyeonggi province	140	51	191
Six major cities	131	36	167
Incheon	46	13	59
Busan	30	8	38
Gwangju	10	3	13
Daegu	19	5	24
Ulsan	11	4	15
Daejeon	15	3	18
Sub-total	564	157	721
Others	117	38	155
Total	681	195	876

The Bank's branch network is designed to provide one-stop banking services tailored to their respective target customers.

Retail Banking Channels

In Korea, many retail transactions are conducted in cash or with credit cards, and conventional checking accounts are generally not offered or used as widely as in other countries such as the United States. An extensive retail branch network has traditionally played an important role as the main platform for a wide range of banking transactions. However, a growing number of customers are turning to other service channels to meet their banking needs, such as Internet banking, mobile banking and other forms of non-face-to-face platforms. In response to such changes, the Bank has recently focused on reorganizing its retail branch network, including shifting, merger or closure of certain branches that are considered redundant.

Recently, one of the key initiatives at the Bank has been to target high net worth individuals through private banking. The Bank's private banking services are provided principally through private banking relationship managers who, within target customer groups, assist clients in developing individual investment strategies. The Bank believes that its relationship managers help foster enduring relationships with the Bank's clients. Private banking customers also have access to the Bank's retail branch network and other general banking products the Bank offers through its retail banking operations.

Corporate Banking Channels

The Bank currently provides corporate banking services through corporate banking service centers primarily designed to serve large corporate customers and hybrid banking branches designed to serve retail as well as small-business corporate customers. Small- and medium-sized enterprises have traditionally been the Bank's core corporate customers and the Bank plans to continue to maintain its strength vis-à-vis these customers.

Self-Service Terminals

In order to complement the Bank's banking branch network, the Bank maintains an extensive network of automated banking machines, which are located in branches and in unmanned outlets. These automated banking machines consist of ATMs, cash dispensers and passbook printers. In December 2015, the Bank introduced digital kiosks, a new generation of automated self-service machines in the Seoul metropolitan area featuring biometric authentication technology and the ability to perform a wide range of services that were not available through traditional ATMs, such as opening new accounts, issuance of debit and check cards, foreign currency exchange and overseas remittance of foreign currency. These digital kiosks are currently being operated at 44 branches in the Seoul metropolitan area. As of December 31, 2019, the Bank had 5,773 ATMs, 13 cash dispensers and 48 digital kiosks. The Bank has actively promoted the use of these distribution outlets in order to provide convenient service to customers, as well as to maximize the marketing and sales functions at the branch level, reduce employee costs and improve profitability. In 2019, automated banking machine transactions accounted for a substantial portion of total deposit and withdrawal transactions of the Bank in terms of the number of transactions and fee revenue generated, respectively.

Electronic Banking

The Bank's Internet banking services are more comprehensive than those available at the counter, including such services as 24 hour account balance posting, real-time account transfer, overseas remittance and loan requests. The Bank also offers mobile banking services in order to enable customers to make speedy, convenient and secure banking transactions using mobile phones. As of December 31, 2019, the Bank had 20,173,251 subscribers to its Internet banking services and 15,222,356 users of its smart banking apps, representing an increase of 9.8% and 8.8%, respectively, compared to December 31, 2018. The Bank continues to experience a rise in the number of online and mobile banking users. The Bank began offering online and mobile banking initially with a view to saving costs rather than increasing revenues, but is currently exploring ways to leverage the possibility of increase revenues through online and mobile banking given that these services offer customers with easier and more convenient access to banking services without limitations of time and space as well as offer tailored and customized service to each customer. In September 2017, the Bank launched "Shinhan Tong," a new mobile and web based platform that is more user friendly and easier to access than previous platforms and does not require additional applications or certifications. Shinhan Tong utilizes mobile identification and non-face-to-face identity authentication technology, which allows users to open new bank accounts, exchange currencies and use other services such as credit card application services without having to visit a physical bank branch. In February 2018, the Bank launched "SOL", a new mobile banking application integrating the Bank's six previously existing mobile applications such as the Shinhan S Bank and Sunny Bank applications. SOL is the cumulation of the Bank's efforts to provide a customer oriented and user friendly mobile banking platform and features, among others, easy-to-use biometric and non-face-to-face identity authentication technology. In addition to innovative features allowing customers to withdraw from their accounts at other banks using the Bank's ATMs and transfer funds with minimal time and effort (for example, with no need to login or insert account numbers), the Bank began offering open banking service in October 2019, allowing customers to access accounts, products and services across multiple banks using only SOL. In November 2019, the Bank also launched "SOL Global", a mobile banking application for foreigners, allowing foreign customers to use open banking and various other financial services. The Bank continues to expand the scope of its mobile banking services by providing innovative offerings, including "SOL Land", a mobile application providing information on real estate prices and loan limits and "SOL Trip", a mobile application providing travel-related services such as foreign currency exchange and travel insurance services.

Overseas Distribution Network

The table below sets forth the Bank's overseas banking subsidiaries and branches as of December 31, 2019.

Business Unit	Location	Year Established or Acquired
Subsidiaries		
Shinhan Asia Ltd.	Hong Kong SAR, China	1982
Shinhan Bank Europe GmbH[(1)]	Frankfurt, Germany	1994
Shinhan Bank America	New York, U.S.A.	1990
Shinhan Bank (China) Limited	Beijing, China	2008
Shinhan Bank (Cambodia) PLC	Phnom Penh, Cambodia	2007
Shinhan Bank Kazakhstan Limited	Almaty, Kazakhstan	2008
Shinhan Bank Canada	Toronto, Canada	2009
Shinhan Bank Japan[(2)]	Tokyo, Japan	2009
Shinhan Bank Vietnam, Ltd.[(3)]	Ho Chi Minh City, Vietnam	2011
Banco Shinhan de Mexico[(4)]	Mexico City, Mexico	2015
PT Bank Shinhan Indonesia[(5)]	Jakarta, Indonesia	2016
Branches		
New York	U.S.A.	1989
Singapore	Singapore	1990
London	United Kingdom	1991
Mumbai	India	1996
Hong Kong	China	2006
New Delhi	India	2006
Kancheepuram	India	2010
Pune	India	2014
Manila	Philippines	2015
Dubai	United Arab Emirates	2015
Sydney	Australia	2016
Yangon	Myanmar	2016
Ahmedabad	India	2016
Ranga Reddy	India	2016
Representative Office[(6)]		
Mexico	Mexico City, Mexico	2008
Uzbekistan	Tashkent, Uzbekistan	2009
Poland[(1)]	Wroclaw, Poland	2014

Notes:

(1) Shinhan Bank Europe GmbH established a representative office in Poland in 2014.

(2) While the Bank established the subsidiary in Japan in 2009, the Bank has provided banking services in Japan through a branch structure since 1986.

(3) Prior to the establishment of this subsidiary in 2011, the Bank provided banking services in Vietnam through a branch since 1995.

(4) Banco Shinhan de Mexico commenced operations in March 2018.

(5) The Bank acquired a 98.01% stake in Bank Metro Express and a 100% stake in Centratama Nasional Bank, two banks in Indonesia, in November 2015 and December 2016, respectively. On March 3, 2016, Bank Metro Express obtained a license to conduct business activities in the name of PT Shinhan Bank Indonesia. Centratama Nasional Bank was merged with PT Bank Shinhan Indonesia on December 6, 2016.

(6) The Bank's representative office in Myanmar was closed as of June 8, 2018.

Currently, the Bank's overseas subsidiaries and branches are primarily engaged in trade financing and local currency funding for Korean companies and Korean nationals in the overseas markets, as well as providing foreign exchange services in conjunction with Shinhan Bank's headquarters. On a limited basis, these overseas branches and subsidiaries also engage in investment and trading of securities of foreign issuers. In the future, as part of the Bank's globalization efforts, the Bank plans to expand its coverage of local customers in the overseas markets by providing a wider range of services in retail and corporate banking, and to that end, the Bank has increasingly established subsidiaries in lieu of branches in select markets and in 2011 merged two of its Vietnam banking subsidiaries in order to enhance its presence and enable greater flexibility in its service offerings in these markets. The Bank plans to maintain its focus on organic growth, while it may selectively pursue acquisitions in markets where it is difficult to obtain local banking licenses through greenfield entry. In furtherance of this objective, the Bank acquired a 98.01% stake in Bank Metro Express and a 100% stake in Centratama Nasional Bank, two banks in Indonesia, in November 2015 and December 2016, respectively. The Bank completed the merger of the two banks in December 2016. The Bank also opened additional branches in Australia, Myanmar and India in the second half of 2016. In April 2017, Shinhan Bank Vietnam Co., Ltd. acquired ANZ Bank (Vietnam) Limited's retail division. In 2017, Shinhan Bank became the first Korean Bank to obtain a license to set up a local subsidiary in Mexico, and started local business in Mexico in March 2018. The Bank plans to continue its efforts to expand its overseas banking service network and global operations.

Subsidiaries

As of December 31, 2019, the Bank had 11 consolidated subsidiaries, details of which are provided in the table below.

Subsidiary[1]	Location	Equity ownership *(In percentages)*	Business
Shinhan Asia Limited	Hong Kong	99.9	Investment banking services, arranging financing and consulting services for Korean companies, and engages in investment banking business in China and Southeast Asian countries.
Shinhan Bank America	New York and California	100.0	General banking services, mostly for Korean customers living in the United States.
Shinhan Bank Canada	Toronto	100.0	General banking services, mostly for Korean customers living in Canada.
Shinhan Bank (China) Limited	Beijing	100.0	Financial services to both local and Korean communities and companies.
Shinhan Bank Europe Gmbh	Frankfurt	100.0	Overseas lending, mostly to Korean corporations and/or their affiliates.
Shinhan Bank Kazakhstan	Almaty	100.0	General banking services, mostly for Korean customers living in Kazakhstan.
Shinhan Bank Japan	Tokyo	100.0	General banking services, mostly for Korean customers living in Japan.
Shinhan Bank Vietnam	Ho Chi Minh City	100.0	General banking services, mostly for local individuals and for Korean customers (including corporations) in Vietnam.
Shinhan Bank (Cambodia)	Phnom Penh	97.5	General banking services, mostly for Korean companies in Cambodia.
Banco Shinhan de Mexico	Mexico City	99.9	Operations not yet commenced.[2]
PT Bank Shinhan Indonesia[3]	Jakarta	99.0	General banking services, mostly for local individuals and for Korean customers (including corporations) in Indonesia.

Notes:

(1) The Bank also has 42 structured entities that are treated as consolidated subsidiaries under K-IFRS.

(2) Banco Shinhan de Mexico commenced operations in March 2018.

(3) The Bank acquired a 98.01% stake in Bank Metro Express and a 100% stake in Centratama Nasional Bank, two banks in Indonesia, in November 2015 and December 2016, respectively. On March 3, 2016, Bank Metro Express obtained a license to conduct business activities in the name of PT Shinhan Bank Indonesia. Centratama Nasional Bank was merged with PT Bank Shinhan Indonesia on December 6, 2016.

Competition

Competition in the Korean financial services industry is, and is likely to remain, intense, including as a result of the sustained low interest rate environment (which narrows opportunities to make profit based on the spread between lending rates and funding rates), the continuing sluggishness in the general economy, the growing maturation and saturation of the industry as a whole, the entry of new market participants and deregulation, among others.

The Bank competes principally with other national commercial banks in Korea, but also faces competition from a number of additional banking institutions, including branches and subsidiaries of foreign banks operating in Korea, regional banks, Internet-only banks, government-owned development banks and Korea's specialized banks, such as Korea Development Bank, the Industrial Bank of Korea and the National Federation of Fisheries Cooperatives, as well as various other types of financial service providers, including savings institutions (such as mutual savings and finance companies, credit unions and credit cooperatives), investment companies (such as securities brokerage firms, merchant banking corporations and asset management companies) and life insurance companies. As of December 31, 2019, Korea had six major nationwide domestic commercial banks (including Citibank Korea Inc. and Standard Chartered Bank Korea Limited, both of which are domestic commercial banks acquired by global financial institutions), six regional commercial banks, two Internet-only banks and branches and subsidiaries of 36 foreign banks. Foreign financial institutions, many of which have greater experiences and resources than the Bank does, may continue to enter the Korean market and compete with the Bank in providing financial products and services either by themselves or in partnership with existing Korean financial institutions.

In the small- and medium-sized enterprise and retail banking segments, which have been the Bank's traditional core businesses, competition is expected to increase further. In recent years, Korean banks, including the Bank, have increasingly focused on stable asset growth based on quality credit, such as corporate borrowers with high credit ratings, loans to SOHO with high levels of collateralization, and mortgage and home equity loans within the limits of the prescribed loan-to-value ratios and debt-to-income ratios. This common shift in focus toward stable growth based on less risky assets has intensified competition as banks compete for the same limited pool of quality credit by engaging in price competition or by other means although the Bank has traditionally focused, and will continue to focus, on enhancing profitability rather than increasing asset size or market share, and has avoided, to the extent practicable, engaging in price competition by way of lowering lending rates. In addition, such competition may result in lower net interest margin and reduced overall profitability, especially if the low interest rate environment were to continue for a significant period of time. The Bank's net interest margin declined slightly to 1.72% in 2019 from 1.81% in 2018 due to, at least partly, decreases in base interest rate by the Bank of Korea from 1.75% to 1.50% in July 2019 and from 1.50% to 1.25% in October 2019 and may decline further as the Bank of Korea has reduced the base interest rate from 1.25% to 0.75% in March 2020 and if the base interest rate is decreased again during 2020. Even if interest rates were to increase, the effect on the Bank's results of operations may not be as beneficial as expected, or at all, due to factors such as increased volatility of market interest rates and tighter regulations regarding SOHO loans, including the implementation of additional credit review guidelines for individual businesses. Further, if competing financial institutions seek to expand market share by lowering their lending rates, the Bank may suffer customer loss, especially among customers who select their lenders principally on the basis of lending rates. In response thereto or for other strategic reasons, the Bank may subsequently lower its lending rates to stay competitive, which could lead to a further decrease in its net interest margins and outweigh any potential positive impact on the net interest margin from a general rise in market interest rates. Any future decline in the Bank's customer base or its net interest margins could have an adverse effect on its results of operations and financial condition.

Consolidation among the Bank's rival institutions and the Government's privatization efforts may also add competition in the markets in which the Bank conducts business. A number of significant mergers and acquisitions in the industry have taken place in Korea recently, including Hana Financial Group's acquisition of Korea Exchange Bank in 2012 and the resulting merger of Hana Bank and Korea Exchange Bank in September 2015. Moreover, in 2014, pursuant to the implementation of the Government's privatization plan with respect to Woori Finance Holdings (now merged into Woori Bank) and its former subsidiaries, Woori Financial, Woori Asset Management and Woori F&I were acquired by KB Financial Group, Kiwoom Securities and Daishin Securities, respectively, and Woori Investment & Securities, Woori Aviva Life Insurance and Woori FG Savings Bank were acquired by NongHyup Financial Group. In addition, in October 2014, the Government's ownership interest in the holding companies of Kwangju Bank and Kyongnam Bank were acquired by JB Financial Group and BS Financial Group (now BNK Financial Group), respectively. In 2015, the Government decided to sell a 30% to 40% interest in Woori Bank to multiple investors in separate blocks ranging from 4% to 10% each. Since December 2016, Korea Deposit Insurance Corporation has consummated sales transactions with seven institutional investors including Kiwoom Securities, Korea Investment and Securities, Hanwha Life Insurance, Tongyang Life Insurance, Eugene Asset Management, Mirae Asset Global Investments and IMM Private Equity for the sale of an aggregate 29.7% interest in Woori Bank in separate blocks. Any of these developments may place the Bank at a competitive disadvantage and outweigh any potential benefit to the Bank in the form of opportunities to acquire new customers who are displeased with the level of services at the newly reorganized entities or to provide credit facilities to corporate customers who wish to maintain relationships with a wide range of banks in order to diversify their sources of funding. The Bank expects that such consolidation and other structural changes in the financial industry will continue. Other financial institutions may seek to acquire or merge with other entities, and the financial institutions resulting from such consolidation may, by virtue of their increased size and business scope, provide greater competition for the Bank. Increased competition and continuing consolidation may lead to decreased margins, resulting in a material adverse impact on the Bank's future profitability.

Regulatory reforms and the general modernization of business practices in Korea have also led to increased competition among financial institutions in Korea. Since July 2015, the FSC has provided, through the Korea Financial Telecommunications and Clearings Institute, the integrated automatic payment transfer management service, which allows account holders to search for, terminate or modify automatic payments they have set up with financial institutions participating in such service (currently including banks, securities companies and other financial institutions such as The Post Office, Korean Federation of Community Credit Cooperatives, National Credit Union Federation of Korea, Mutual Savings Bank and National Forestry Cooperative Federation). In addition, the FSC began providing the integrated account management service from December 2016, which allows account holders to search for detailed information of their bank accounts opened in banks participating in such service, close small-sum inactive accounts (i.e., accounts with no transaction activity during the previous one year period and with a balance of less than ₩500,000) and transfer the balance in such accounts to other accounts. Moreover, in December 2017, the FSC introduced the "my account at a glance" system, which enables consumers to view their key financial account information online, including information on banks, insurances, mutual finance, loan and card issuances on one page. The "my account at a glance" system became available on mobile channels in February 2016 and expanded its scope of services to include savings banks and securities companies. Since their introduction, the integrated automatic payment transfer management service, integrated account management service and "my account at a glance" system have gained widespread acceptance. As the reform of the financial sector continues, competition may become more intense among existing banks, insurance companies, securities companies and other financial organizations, and may lead to significant changes in the current Korean financial market. Moreover, the Regulation on the Supervision of the Banking Business was amended on July 12, 2018 to provide that, beginning on January 1, 2020, in calculating loan to deposit ratio, retail loans and corporate loans are weighed differently, with retail loans subject to a multiple of 115% and corporate loans (excluding loans to SOHOs) subject to a multiple of 85%, thereby increasing the impact of retail loans and reducing the impact of corporate loans in calculating such ratio. This may further intensify competition for corporate loans and deposits among commercial banks and, as a result, the Bank may face difficulties in increasing or retaining its corporate loans and deposits, which in turn may result in an increase in its cost of funding.

Furthermore, as the Korean economy further develops and new business opportunities arise, more competitors may enter the financial services industry. For example, as online service providers and technology companies with large-scale user networks, such as Kakao Corp., NAVER and Samsung Electronics, recently make significant inroads in providing virtual payment services through a system based on a growing convergence of financial services and technology commonly referred to as "fintech," competition for online customers is growing not just among commercial banks, but also from online and mobile payment service providers. In 2015, the Government announced its plans to allow Internet-only banks to operate in Korea. KT consortium's K-Bank and Kakao consortium's Kakao Bank commenced operations in April 2017 and July 2017, respectively, and Viva Republica consortium's Toss Bank has recently obtained preliminary business authorization from the FSC on December 16, 2019. Internet-only banks may have advantages over traditional banks as the former can pass savings in labor and overhead costs to their customers by offering higher interest rates on deposit accounts, lower loan costs and reduced service fees. Accordingly, commercial banks will likely face increasing pressure to upgrade their service platforms to attract and maintain online users, which represents a growing customer base compared to traditional customers who have primarily conducted banking in-person at physical banking branches.

As part of the Government's financial policies to promote innovative digital finance, 10 commercial banks, including Shinhan Bank, began offering a preliminary open banking service in October 2019. More local banks and fintech companies joined in December 2019, when the open banking service was fully and officially launched. Open banking service allows each fintech company and bank to provide banking services, such as checking balances and making withdrawals and transfers, with regards to customers' accounts at other banks. Using open banking service, customers can easily access accounts, products and services across multiple banks, instead of being limited to the accounts, products and services available at the particular bank that they deal with. In addition, on January 9, 2020, the Korean National Assembly passed amendments to three major data privacy laws (the Personal Information Protection Act, the Act on the Promotion of Information and Communications Network Utilization and Information Protection and the Act on the Use and Protection of Credit Information). These amendments introduced the MyData service, allowing and requiring (upon the customer's request and subject to compliance requirements) financial institutions that have been approved by the FSC as a MyData service provider access and sharing of customers' personal information, credit information and transaction data. If and when fintech companies receive authorization as MyData service providers, we expect competition for customers among banks and fintech firms such as Kakao Pay, Toss and Bank Salad to intensify.

Recently, following the global financial crisis, the Government has subjected Korean financial institutions to stricter regulatory requirements and guidelines in areas of asset quality, capital adequacy, liquidity and residential and other lending practices (including a requirement to maintain a certain ratio of core capital to total risk exposure, which was introduced in January 2018 in order to control excessive leverage), which has had a dampening effect on competition. The FSC implemented the capital requirements of Basel III, whose minimum requirements were phased in sequentially from December 1, 2013 through full implementation by January 1, 2015, based on the guidelines set forth in the amended Regulation on the Supervision of the Banking Business and the Detailed Regulation on the Supervision of the Banking Business. In addition, the FSC has implemented the Basel III requirements relating to liquidity coverage ratio and capital conservation buffer, each of which have been fully phased in as of January 1, 2019. As of January 1, 2016, the FSC implemented Basel III requirements relating to accumulation of additional capital for systemically important banks and countercyclical capital buffer requirements. Each year, the FSC may designate banks with significant influence (based on size and connectivity with other financial institutions) on the domestic financial system as a domestic systemically important bank and require the accumulation of additional capital in accordance with the highest of: (i) ratio of common equity capital to risk-weighted assets, ranging from 0.0% to 2.0%, depending on the systematic importance evaluation score, (ii) if the bank's holding company is a domestic systemically important bank holding company, the capital ratio corresponding to the additional capital required for the bank holding company under the Financial Holding Company Supervision Regulations, or (iii) if the bank is also a global systemically important bank, as defined by the Basel Committee, the capital ratio as required by the Basel Committee. According to the instructions of the FSC, domestic systematically important banks including the Bank have been required to maintain an additional capital buffer of 0.25% since January 1, 2016, with such buffer increased by 0.25% annually to reach 1.00% as of January 1, 2019. The FSC may also, upon quarterly review, determine and require banks to accumulate a required level of countercyclical capital buffer within the range of 0% to 2.5% of risk-weighted assets, taking into account factors such as the degree of increase in credit relative to the gross domestic product. However, there is no assurance that these measures will have the effect of curbing competition or that the Government will not reverse or reduce such measures or introduce other deregulatory measures, which may further intensify competition in the Korean financial services industry.

If, despite its efforts to adapt to the changing macroeconomic environment and comply with new regulations, the Bank is unable to compete effectively in the changing business and regulatory environment, its profit margin and market share may erode and its future growth opportunities may become limited, which could adversely affect its business, financial condition and results of operations. See "*Risk Factors — Risks Relating to the Bank's Business — Competition in the Korean financial services industry is intense, and may further intensify" and "Supervision and Regulation*."

Information Technology

The Bank dedicates substantial resources to maintaining a sophisticated information technology system to support its operations management and provide high quality customer service. The Bank's information and technology system is operated by Shinhan Financial Group at a group-wide level based on comprehensive group-wide information collection and processing. Shinhan Financial Group also operates a single group-wide enterprise information technology system known as "enterprise data warehouse" for customer relations management capabilities, risk management systems and data processing. Shinhan Financial Group continually upgrades its group-wide information technology system in order to apply the best-in-class technology to its risk management systems and risk thresholds to reflect the changes in its business environment as well as enhance differentiation from its competitors.

In 2013, Shinhan Financial Group completed the construction of the Shinhan Data Center, which is responsible for comprehensive management of information technology systems for all subsidiaries on a groupwide basis. This center ensures a stable use of a central information processing facilities for at least 15 years and is designed to maximize operational and cost efficiency as well as enhance information security by combining the various data centers. The Bank relocated its information management capabilities to this center in 2014.

In order to enhance security and trustworthiness of the financial services provided by its subsidiaries, Shinhan Financial Group seeks to continually enhance a group-wide set of standards for information security and upgrading the related systems. In 2008, Shinhan Financial Group established group-wide information systems and policies, which have since been continually updated and upgraded. In 2017, Shinhan Financial Group further upgraded the group-wide information security control tower to a best-in-class level and replaced most of its internal information security staff with highly qualified outside experts in order to reinforce its security defense capabilities in the event of cyber breaches.

The Bank also continues to upgrade the information technology systems to enhance the quality of its customer service and thereby bolster its competitiveness, including with respect to electronic and mobile banking, online consultation, expanded sales services and customized informational services. In addition, the Bank has recently strengthened its indirect service channels through a major upgrade of its corporate online banking services and expansion of mobile phone-based product offerings and sales and service networks, such as the launch of the Bank's banking application SOL, in light of the growing base of customers who increasingly access financial services through their mobile phones. Furthermore, the Bank has expanded, and will continue to expand, information technology systems to support the sales and operational capabilities of its overseas subsidiaries and branches through a global customer management system as well as provide country-specific financial services.

The Bank's information technology system is currently backed up on a real-time basis. In 2014, Shinhan Financial Group converted the pre-existing data center to a back-up and disaster recovery center for all of its subsidiaries' operations, including the Bank's operations, in order to provide customer services in a continued seamless manner even in the case of an interruption at the Shinhan Data Center.

Properties

The Bank's registered office and corporate headquarters are located at 20 Sejong-Daero 9-Gil, Jung-Gu, Seoul, Korea 04513. Information regarding certain of the Bank's properties in Korea is presented in the following table.

		Area (in square meters)	
Type of Facility	**Location**	**Building**	**Site**
Registered office and corporate headquarters	20, Sejong-Daero 9-Gil, Jung-Gu, Seoul, Korea 04513	73,020	5,418
Shinhan Bank Gwanggo Annex	54, Cheongyecheon-Ro, Jung-Gu, Seoul, Korea 04540	3,652	6,783
Shinhan Back Office Support Center	1311, Jungang-Ro, Ilsandong-Gu, Goyang-Si, Kyunggi Province, Korea 10401	24,841	5,856
Shinhan Bank Back Office and Call Center	251, Yeoksam-Ro, Gangnam-Gu, Seoul, Korea 06225	40,806	7,964
Shinhan Centennial Building	29, Namdaemun-Ro 10-Gil, Jung-Gu, Seoul, Korea 04540	19,697	1,389
Shinhan Bank Gwanggyo Branch	54, Cheongyecheon-Ro, Jung- Gu, Seoul 04540	16,762	6,783
Shinhan Myongdong Branch	43, Myongdong-Gil, Jung- Gu, Seoul, Korea 04534	8,937	1,017
Shinhan Youngdungpo Branch	27, Yeongjung-Ro, Yeongdeungpo-Gu, Seoul, Korea 07301	6,172	1,984
Shinhan Bank Back Office and Storage Center	3, Danjae-Ro 291beon-Gil, Sangdang-Gu, Cheongju-Si, Chungcheongbuk-Do, Korea 28784	6,398	5,377

The Bank's principal establishment is in Seoul, Korea and has a total floor area of approximately 653,198 square meters. The Bank owns, directly or indirectly, a majority interest in its headquarters building. In addition, the Bank owns or leases various sites and buildings for its branches. The Bank houses its central mainframe computer system at its information technology center in the Seoul metropolitan area.

As of December 31, 2019, the Bank had a countrywide network of 876 branches. Approximately 22.4% of these facilities were housed in buildings owned by the Bank, while the remaining branches were leased properties.

The net book value of all properties owned by the Bank as of December 31, 2019 was ₩2,280 billion. The Bank does not own any material properties outside of Korea.

Legal Proceedings and Other Matters

The Bank is involved in various legal actions and regulatory proceedings arising from the normal course of its business. As of December 31, 2019, the Bank was the defendant in pending lawsuits (including regulatory proceedings) in the aggregate claim amount of ₩68,638 billion, for which it recorded a provision of ₩5.9 billion. The Bank's management believes, based on currently available information, that these lawsuits and proceedings, in the aggregate, will not have a material adverse effect on its financial condition or results of operations.

In October 2018, the FSS requested the Bank to submit supporting documents in connection with allegations of inadequate compliance controls. In November 2018, the FSS notified the Bank of an institutional caution for alleged deficiencies in its customer due diligence. In December 2019, the FSS notified the Bank of an institutional caution and imposed an administrative fine of ₩3 billion for alleged prohibited activities, including promotional activities for specified money trusts, investment solicitation for derivatives and management of trust properties.

It has been reported in the press that certain employees of the Bank have been indicted by the Prosecutors' Office of Korea (the "**Prosecutors' Office**") for allegedly illegally influencing the hiring process of new employees and manipulating hiring standards for certain candidates. As of the date of this offering circular, six current and former employees of the Bank, each of whom had occupied positions within the Bank's recruiting department between 2013 and 2016, have been indicted for alleged illegal hiring activities while they occupied such positions at the Bank. In addition to these employees, on September 17, 2018, the Prosecutors' Office also indicted Shinhan Financial Group's current chairman and chief executive officer, who had also been the Bank's former President, Chief Executive Officer and Executive Director from March 2015 through March 2017, for alleged illegal hiring activities while he occupied such position at the Bank. On January 22, 2020, the Seoul Eastern District Court found him partially guilty on charges of influence-peddling and issued a six-month prison term, suspended for two years, which has been appealed to a higher court. No date has been set for the higher court proceedings. The Bank believes that it has robust and fair internal procedures for hiring new employees. As part of the Bank's efforts to enhance fairness and transparency of its hiring practices, the Bank has adopted the model hiring procedures promulgated by the Korea Federation of Banks, and beginning in 2018 has established a hiring committee consisting of third-party human resources experts and internal compliance officers.

In August 2019, the FSS launched an investigation into Lime Asset Management Co., Ltd. ("**Lime Asset**"), Korea's largest hedge fund managing approximately ₩4.1 trillion in assets as of December 30, 2019, including with regards to allegations that Lime Asset had concealed the fact that it had changed the multi-manager trade finance fund's investment method and concealed losses in their trade finance funds. Beginning in October 2019, Lime Asset suspended withdrawals from certain of its funds, freezing approximately ₩1.7 trillion in total as of the end of 2019, according to the FSS. According to FSS investigations, Lime Asset's ₩600 billion trade finance fund was found to have been associated with a debacle involving the International Investment Group LLC ("**IIG**"), a New York-based investment adviser charged with securities fraud and running a Ponzi scheme. On November 26, 2019, the SEC revoked the registration of IIG for allegedly overvaluing defaulted loans in the fund's portfolio to conceal losses in its flagship hedge fund and selling at least $60 million in fake loan assets to clients. According to the FSS, Lime Asset signed a contract with a Singaporean commodity trader, which took over Lime Asset's ownership stake in an IIG fund at a discounted price in June 2019, with the Singaporean entity issuing promissory notes to Lime Asset, and Lime Asset did not properly disclose to its investors such change in the fund's investment target from the IIG fund to promissory notes. Certain investors in funds of Lime Asset have filed dispute mediation claims to the FSS and criminal and civil claims against Lime Asset, as well as against financial institutions that have sold such products, claiming they learned of the change in the trade finance fund's investment method and losses only in October 2019 and that they were also misguided and not fully informed of the risks associated with these funds when investing in such products. The FSS is continuing investigations into Lime Asset as well as financial institutions that have sold Lime Asset products, including the Bank. According to the FSS, as of December 31, 2019 the total amount of troubled funds sold through Korean financial institutions is approximately ₩1.67 trillion, of which the Bank sold 478 accounts in the amount of approximately ₩277 billion. In addition, in February 2020, the Prosecutors' Office of Korea announced that they have launched an investigation into Lime Asset as well as Shinhan Investment Corp. in connection with this matter. The Bank has cooperated with the FSS's investigations, including responding to FSS requests during a comprehensive audit in November and December 2019, and has also organized an internal task force within the Bank's Customer Protection Department to help resolve this issue.

As of the date of this offering circular, the Bank's management believes that these proceedings will not have a material adverse effect on the Bank's financial condition, equity or results of operations. However, although the Bank plans to rigorously defend its positions in the lawsuits or other regulatory proceedings against the Bank, it is difficult to predict the final outcome of these proceedings and the potential impact these proceedings and related events may have on the Bank or the price of the Notes. The total amount in dispute may increase during the course of litigation, and other lawsuits may be brought against the Bank based on similar allegations. Accordingly, we cannot assure you that these proceedings and related events will not have an adverse effect on the Bank or the price of the Notes. For further details of these and other litigation matters, see Note 39 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2017 and 2018 and Note 38 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2018 and 2019 included elsewhere in this offering circular.

DESCRIPTION OF ASSETS AND LIABILITIES

Unless otherwise indicated, all information set forth below is presented on a consolidated basis. Unless otherwise indicated, the assets and liabilities of the trust accounts of the Bank are discussed under the heading "Trust Accounts."

Loan Portfolio

The Bank extends loans from both its bank and trust accounts. Guarantees are not categorized as loans unless and until the Bank has made a payment on behalf of a customer in relation to the guarantee.

The total exposure of the Bank to any single borrower and exposure to any single group of companies belonging to the same enterprise group as defined in the Monopoly Regulation and Fair Trade Act is limited by law to 20% and 25%, respectively, of the sum of Tier I and Tier II capital (less any capital deductions). The total exposure of Shinhan Financial Group and its subsidiaries, including the Bank, to any single borrower and exposure to any single group of companies belonging to the same enterprise group as defined in the Monopoly Regulation and Fair Trade Act is limited by law to 20% and 25%, respectively, of the Net Total Equity Capital (as defined under the Presidential Decree of the Financial Holding Companies Act).

The following table presents the Bank's loans by type as of the dates indicated. Except where specified otherwise, all loan amounts stated below are before allowance for loan losses and deferred loan origination costs and fees. Total loans reflect the Bank's loan portfolio, including past due amounts.

	As of December 31,		
	2017	**2018**	**2019**
	(in billions of Won)		
Corporate(1)	₩ 129,088	₩ 140,361	₩ 146,699
Retail(2)	103,724	112,698	123,372
Total(3)	₩ 232,812	₩ 253,059	₩ 270,071

Notes:

(1) Includes loans to public and other, and loans to banks.

(2) Includes credit card receivables.

(3) As of December 31, 2017 and 2018 and 2019, 87.4%, 87.0% and 86.1% of the Bank's total gross loans, respectively, were Won-denominated.

10 Largest Exposures by Individual Borrower

As of December 31, 2019, the Bank's 10 largest exposures, consisting of loans, securities and guarantees and acceptances, totaled ₩50,022 billion and accounted for 26.8% of its total exposure on a separate basis, respectively. The following tables set forth the Bank's total exposure to its top 10 borrowers, on a separate basis, as of the dates indicated.

As of December 31, 2019	Loans in Won	Loans in Foreign Currency	Securities	Guarantees and Acceptances	Total Exposure
			(in billions of Won)		
Ministry of Strategy and Finance	₩ —	₩ —	₩ 20,201	₩ —	₩ 20,201
The Bank of Korea	1,660	—	6,409	—	8,069
Korea Housing Finance Corporation	—	—	5,126	—	5,126
Industrial Bank of Korea	729	11	3,921	—	4,661
Korea Development Bank	7	—	4,433	71	4,511
The Export-import Bank of Korea	—	12	2,181	—	2,193
Samsung Electronics Co., Ltd.	—	1,857	—	—	1,857
Hana Bank	375	127	640	75	1,217
Korea Deposit Insurance Corporation	—	—	1,136	—	1,136
Government of the United States of America	—	—	1,051	—	1,051
Total	₩ 2,771	₩ 2,007	₩ 45,098	₩ 146	₩ 50,022

Exposure to Main Debtor Groups

As of December 31, 2019, 9.8% of the Bank's total exposure was to the 10 main debtor groups as identified by the Governor of the FSS, which are largely comprised of *chaebol*s. The following table shows, as of the dates indicated, the Bank's total exposure to the 10 main debtor groups to which the Bank has the largest exposure.

As of December 31, 2019	Loans in Won Currency	Loans in Foreign Currency	Securities	Guarantees and Acceptances	Others	Total Exposure
			(in billions of Won)			
Samsung	₩ 195	₩ 2,286	₩ 599	₩ 717	₩ 0	₩ 3,797
Hyundai Motors	475	2,102	543	301	0	3,421
SK	757	391	446	442	0	2,036
Lotte	57	681	637	350	0	1,725
LG	312	435	545	354	0	1,646
Hyundai Heavy Industries	107	82	39	1,277	—	1,505
LS	101	416	172	704	0	1,393
Hanhwa	223	300	458	340	0	1,321
GS	16	347	98	283	0	744
Hyosung	116	408	41	172	0	737
Total	₩ 2,359	₩ 7,448	₩ 3,578	₩ 4,940	₩ 0	₩ 18,325

Loan Concentration by Industry

The following table shows the aggregate balance of the Bank's corporate loans by industry concentration as of December 31, 2019.

Industry	Aggregate Loan Balance (As of December 31, 2019)	Percentage of Total Corporate Loan Balance (As of December 31, 2019)
	(in billions of Won, except percentages)	
Manufacturing	₩ 46,111	31.43%
Real estate leasing and service	28,868	19.68
Retail and wholesale	19,318	13.17
Finance and insurance	10,987	7.49
Construction	3,172	2.16
Hotel and leisure[1]	7,100	4.84
Other	31,143	21.23
Total	₩ 146,699	100.00%

Note:

(1) Consists principally of hotels, motels and restaurants.

Maturity Analysis

The following table sets out the scheduled maturities (presented in terms of time remaining until maturity) of the Bank's loan portfolio as of December 31, 2019. The amounts below are before allowance for loan losses and deferred loan origination costs and fees. In the case of installment payment loans, maturities have been adjusted to take into account the timing of installment payments.

	As of December 31, 2019			
	1 Year or Less	Over 1 Year but Not More Than 5 Years	Over 5 Years[1]	Total
	(in billions of Won)			
Corporate	₩ 98,035	₩ 43,141	₩ 5,523	₩ 146,699
Retail	47,831	31,933	43,608	123,372
Total gross loans	₩ 145,866	₩ 75,074	₩ 49,131	₩ 270,071

Note:

(1) Includes overdue loans.

The Bank may roll over its corporate loans (primarily consisting of working capital loans and facilities loans) and retail loans (to the extent not payable in installments) after the Bank conducts its standard loan review in accordance with its loan review procedures. Working capital loans of the Bank may generally be extended on an annual basis for an aggregate term of up to five years. Facilities loans, which are generally secured, may generally be extended on an annual basis for a maximum of 15 years from the initial loan date. Retail loans may be extended for additional terms of up to 12 months for an aggregate term of 10 years from the initial loan date for both unsecured loans and secured loans.

Interest Rate Sensitivity

The following table presents a breakdown of the Bank's loans in terms of interest rate sensitivity as of December 31, 2019.

	As of December 31, 2019		
	Due Within 1 Year[(1)]	**Due After 1 Year**	**Total**
	(in billions of Won)		
Fixed rate loans[(2)]	₩ 51,210	₩ 25,141	₩ 76,351
Variable rate loans[(3)]	94,656	99,064	193,720
Total gross loans	₩ 145,866	₩ 124,205	₩ 270,071

Notes:

(1) Includes overdue loans.

(2) Fixed rate loans are loans for which the interest rate is fixed for the entire term of the loan.

(3) Variable or adjustable rate loans are for which the interest rate is not fixed for the entire term of the loan.

For additional information regarding the Bank's management of interest rate risk for its loans, see "*Risk Management — Market Risk Management — Market Risk Exposure from Trading Activities*."

Nonaccrual Loans and Past Due Accruing Loans

Except in the case of repurchased loans, the Bank generally recognizes interest income on nonaccrual loans using the rate of interest used to discount the future cash flows of such loans for the purpose of measuring impairment loss. Generally, the Bank discontinues accruing of interest on loans (other than repurchased loans) when payment of interest and/or principal becomes past due by 90 days. Loans (other than repurchased loans) are not reclassified as accruing until interest and principal payments are brought current.

The Bank generally does not request borrowers to make immediate repayment of the whole outstanding principal balances and related accrued interest on loans whose interest payments are past due for one to 14 days in the case of commercial loans and one to 30 days in the case of retail loans.

Interest foregone is the interest due on nonaccrual loans that has not been accrued in the Bank's books of account. In 2017, 2018 and 2019, the Bank would have recorded gross interest income of ₩47 billion,

₩39 billion and ₩43 billion, respectively, on loans accounted for on a nonaccrual basis throughout the respective years, or since origination for loans held for part of the year, had the loans been current with respect to their original contractual terms. The amount of interest income on those loans that was included in the Bank's profit for the year in 2017, 2018 and 2019 were ₩30 billion, ₩25 billion and ₩25 billion, respectively.

The following table shows, at the dates indicated, the amount of loans that are placed on a nonaccrual basis and accruing loans which are past due one day or more. The term "accruing but past due one day" includes loans which are still accruing interest but on which principal or interest payments are contractually past due one day or more. The Bank continues to accrue interest on loans where the total amount of loan outstanding, including accrued interest, is fully secured by cash on deposits.

	As of December 31,		
	2017	2018	2019
	(in billions of Won)		
Loans accounted for on a nonaccrual basis[1]			
Corporate	₩ 945	₩ 824	₩ 818
Retail	281	314	365
Sub-total	₩ 1,226	₩ 1,138	₩ 1,183
Accruing loans which are contractually past due one day or more as to principal or interest			
Corporate	157	189	244
Retail	403	439	571
Sub-total	560	628	815
Total	₩ 1,786	₩ 1,766	₩ 1,998

Note:

(1) Represents either loans that are "troubled debt restructurings" as defined under K-IFRS or loans for which payment of interest and/or principal became past due by 90 days or more (adjusting for any overlap due to loans that satisfy both prongs so as to avoid double counting).

Troubled Debt Restructurings

See "— *Credit Exposures to Companies in Workout and Recovery Proceedings*."

The following table presents, at the dates indicated, the Bank's loans which are "troubled debt restructurings." These loans mainly consist of corporate loans that have been restructured through the process of workout and recovery proceedings. See "— *Credit Exposures to Companies in Workout and Recovery Proceedings*." These loans accrue interest at rates lower than the original contractual terms, or involve the extension of the original contractual maturity as a result of a variation of terms upon restructuring.

	As of December 31,		
	2017	2018	2019
	(in billions of Won)		
Loans classified as "troubled debt restructurings" (excluding nonaccrual and past due loans)	₩ 50	₩ 12	₩ 89
Loans classified as "troubled debt restructurings" (including nonaccrual and past due loans)	₩633	₩428	₩413

The following table presents, for the periods indicated and with respect to the restructured loans, the amounts that would have been recorded as the Bank's interest income under the original contract terms of the restructured loans, and the amounts that were actually recorded as the Bank's interest income for such loans under the restructured contractual terms of such loans.

	As of December 31,		
	2017	2018	2019
	(in billions of Won)		
Interest income under the original contractual terms of the restructured loans(1)	₩28	₩19	₩19
Interest income under the restructured contractual terms of the restructured loans	₩16	₩ 7	₩ 6

Note:

(1) Includes nonaccrual and past due loans.

The following table presents a breakdown of the outstanding balance and specific allowance for loan losses as of the dates indicated, of corporate loans classified as "troubled debt restructurings" (including nonaccrual and past due loans) by the type of restructuring to which such loans are subject.

	As of December 31,					
	2017		2018		2019	
	Outstanding balance	Allowance	Outstanding balance	Allowance	Outstanding balance	Allowance
	(in billions of Won)					
Corporate loans classified as "troubled debt restructurings"(1):						
Workout	₩391	₩275	₩ 331	₩ 237	₩ 292	₩ 140
Court receivership and composition	242	94	97	33	121	32
Total	₩633	₩369	₩ 428	₩ 270	₩ 413	₩ 172

Note:

(1) Includes nonaccrual and past due loans.

The following table presents the outstanding balance and specific allowance for loan losses as of the dates indicated of retail loans (including nonaccrual and past due loans) subject to workouts under the "pre-workout program" for retail borrowers (which loans are not part of the aforementioned corporate loans and therefore not included in the table above. For more information on the "pre-workout program," see "— *Credit Exposures to Companies in Workout and Recovery Proceedings — Credit Rehabilitation Programs for Delinquent Consumer and Small- and Medium-sized Enterprise Borrowers*."

	As of December 31,					
	2017		2018		2019	
	Outstanding balance	Allowance	Outstanding balance	Allowance	Outstanding balance	Allowance
	(in billions of Won)					
Retail loans subject to workouts under the "pre-workout program"(1)	₩34	₩21	₩67	₩36	₩106	₩61

Note:

(1) Includes nonaccrual and past due loans.

The following table presents, as of the dates indicated and with respect to corporate loans, the amounts of restructured loans that were considered impaired and classified as nonaccrual pursuant to the Bank's general interest accrual policy as described below. The table also presents, for the periods indicated and with respect to corporate loans, the amounts of total charge-off on restructured loans and the amounts of charge-off on restructured loans related to loans converted into equity securities as part of restructuring.

	As of and for the year ended December 31,		
	2017	2018	2019
	(in billions of Won)		
Impaired and nonaccrual restructured loans(1)	₩897	₩ 416	₩ 324
Total charge-off on restructured loans(1)	70	59	134
Charge-off on restructured loans related to loans converted into equity securities as part of restructuring(1)	41	67	226

Note:

(1) Includes corporate loans only.

Credit Exposures to Companies in Workout and Recovery Proceedings

The Bank's credit exposures to restructuring are monitored and managed by its Corporate Credit Collection Department. As of December 31, 2019, 0.15% of the Bank's total loans, or ₩413 billion (of which ₩324 billion was classified as nonaccrual and ₩89 billion was classified as accruing), was under restructuring. Restructuring of the Bank's credit exposures generally takes the form of workout and recovery proceedings.

Workout

The original Corporate Restructuring Promotion Act (Act No. 6504) ("**Old CRPA**") was enacted on August 14, 2001 in order to facilitate the out-of-court restructuring of insolvent companies. This law expired on December 31, 2005, and new Corporate Restructuring Promotion Acts were enacted on August 3, 2007 (expired on December 31, 2010), May 19, 2011 (expired on December 31, 2013), January 1, 2014 (expired on December 31, 2015), March 18, 2016 (expired on June 30, 2018) and October 16, 2018 (to be expired on October 15, 2023, the new CRPA enacted and implemented on October 16, 2018 is hereinafter referred to as the "**CRPA**").

If the 'main Creditor Financial Institution' of a Failing Company provided notice of convening a Creditor Committee (defined below) on or before October 15, 2023, any proceedings commenced by such Creditor Committee will remain subject to the CRPA even after October 15, 2023 unless and until such proceedings are completed or discontinued.

The following is a summary of the key provisions of the CRPA. The CRPA applies to a financial creditor (the "**Financial Creditor**") who has financial claims against a debtor company by 'providing credit' to such debtor company or other third parties. "**Provision of Credit**" is defined in the CRPA as any transaction determined by the FSC to fall under any of the following:

- loans;
- purchase of promissory notes and debentures or bonds;
- equipment leasing;
- payment guarantees;
- providing advance payments on acceptances and guarantees under a payment guarantee;
- any direct or indirect financial transaction which may cause a loss to a counterparty as a consequence of a payment failure by a debtor company; or
- any transaction other than the transactions set out above which may have in substance the same effect as the transactions set out above.

The "**debtor company**" is defined under the CRPA as a company established under the Korean Commercial Code or other person performing profit-making activities. The Failing Company means a debtor company deemed, through a credit evaluation carried out in the manner set out in the CRPA, by its 'main Creditor Financial Institution' as having difficulty to repay debts to its financial creditor without external financial support or an additional loan (excluding loans obtained in the course of conducting normal financial transactions).

Once the debtor company is notified by the main Creditor Financial Institution to fall under the definition of Failing Company, such company may submit its business restructuring plan and the list of its Financial Creditors, and apply to such main Creditor Financial Institution for commencement of the management procedure to be assumed by a committee of Financial Creditors (the "**Creditor Committee**") or such main Creditor Financial Institution.

Under the CRPA, the main Creditor Financial Institution of a Failing Company is required to take or arrange one of the following actions if it determines that there is a possibility that the financial condition of the Failing Company may be rehabilitated or brought back to normal in accordance with its business restructuring plan:

- convocation of the first meeting of the Creditor Committee to decide whether to commence the management of the Failing Company by the Creditor Committee; or

- assumption of management of the Failing Company by the main Creditor Financial Institution.

Under the CRPA, in order to call for the first meeting of the Creditor Committee, the main Creditor Financial Institution is required to notify the Financial Creditors, the Failing Company and the FSS. However, the main Creditor Financial Institution may omit the notification to some extent of the Financial Creditors who are set out in the CRPA such as a Financial Creditor who does not perform the financial business or a Financial Creditor who has only small claims against the Failing Company. The Financial Creditors who do not receive the notification from the main Creditor Financial Institution will be excluded from the Creditor Committee; provided that if they nevertheless want to attend the meeting, the main Creditor Financial Institution may not exclude such Financial Creditors. When the main Creditor Financial Institution calls for the first meeting of the Creditor Committee, it may require the Financial Creditors to grant a moratorium on the enforcement of claims (including the enforcement of security interests) until the end of the first meeting of the Creditor Committee. In addition, at the first meeting of the Creditor Committee, the Financial Creditors may resolve to declare a moratorium for up to one month (or three months if an investigation of the Failing Company's financial status is necessary) from the commencement date of the management procedure (which may be extended by one additional month by resolutions of the Creditor Committee).

The Financial Creditors who attend the first meeting of the Creditor Committee may resolve, among other things: (i) commencement of the management procedure, (ii) composition of the Financial Creditors who will participate in such management procedure and (iii) declaration of moratorium mentioned above.

Once the management procedure commences, the main Creditor Financial Institution is required to prepare the corporate restructuring plan of the Failing Company considering the investigation results of the Failing Company's financial status and submit such plan to the Creditor Committee for approval thereof. The corporate restructuring plan may include, among other things, the matters regarding rescheduling of debt owed by the Failing Company, provision of new credit and the business restructuring plan of the Failing Company. If the corporate restructuring plan is not approved by the date the moratorium period ends, the Creditor Committee's management of the Failing Company shall be deemed to have terminated.

The resolution at the Creditor Committee is generally passed by an approval of the Financial Creditors representing at least 75 per cent. of the outstanding credit to the Failing Company of the Financial Creditors who constitute the Creditor Committee; provided that if a single Financial Creditor holds at least 75 per cent. of the outstanding credit, the resolution shall be passed by an approval of not less than 40 per cent. of the total number of the Financial Creditors who constitute the Creditor Committee, including such single Financial Creditor. An additional approval of the Financial Creditors holding interests in 75 per cent. or more of the total amount of the secured claims owned by the Financial Creditors constituting the Creditor Committee against the Failing Company is required with respect to the debt rescheduling of the Failing Company.

A Financial Creditor which has opposed the resolutions of the Creditor Committee in respect of the commencement of management of the Failing Company by the Creditor Committee, establishment of or amendment to the corporate restructuring plan, extension of management procedure, the rescheduling of claims or provision of new credit (the "**Opposing Financial Creditor**") may, within seven days of such resolutions, request the main Creditor Financial Institutions to purchase its outstanding claims against the Failing Company, stating the type and number of claims. The Financial Creditors that have approved such resolutions (the "**Approving Financial Creditors**") shall jointly purchase such claims within six months of such request.

The purchase price and terms of such purchase shall be determined by mutual agreement of the Approving Financial Creditors and the Opposing Financial Creditor. Pending the agreement of such matters, the payments shall be made at a provisional price, and adjusting payments made once an agreement has been reached. If no such agreement is reached, then such matters shall be determined by the coordination committee established under the CRPA.

Recovery Proceedings

Under the Debtor Rehabilitation and Bankruptcy Act, which took effect on April 1, 2006, court receiverships have been replaced with recovery proceedings. In a recovery proceeding, unlike court receivership proceedings where the management of the debtor company was vested in a court appointed receiver, the existing chief executive officer of the debtor company may continue to manage the debtor company, provided, that (i) neither fraudulent conveyance nor concealment of assets existed, (ii) the financial failure of the debtor company was not due to gross negligence of such chief executive officer, and (iii) no creditors' meeting was convened to request, based on reasonable cause, a court-appointed receiver to replace such chief executive officer. Recovery proceeding may be commenced by any insolvent debtor. Furthermore, in an effort to meet global standards, international bankruptcy procedures have been introduced in Korea under which a receiver of a foreign bankruptcy proceeding may, upon receiving Korean court approval of the ongoing foreign bankruptcy proceeding, apply for or participate in a Korean bankruptcy proceeding. Similarly, a receiver in a domestic recovery proceeding or a bankruptcy trustee is allowed to perform its duties in a foreign country where an asset of the debtor is located to the extent the applicable foreign law permits.

As of December 31, 2019, the total loan amount subject to recovery proceedings was ₩121 billion. No loan amount was subject to court receivership or composition proceedings.

Loans in the process of workout and recovery proceedings are reported as nonaccrual loans on the Bank's statements of financial position as described in "— *Nonaccrual Loans and Past Due Accruing Loans*" above since generally, they are past due by more than 90 days and interest does not accrue on such loans. Restructured loans that meet the definition of a troubled debt restructuring are reported as troubled debt restructurings as described above in "— *Troubled Debt Restructurings*." Such restructured loans are reported as either loans or securities on the Bank's statements of financial position depending on the type of instrument it receives as a result of the restructuring.

Credit Rehabilitation Programs for Delinquent Consumer and Small- and Medium-sized Enterprise Borrowers

In light of the gradual increase in delinquencies in credit card and other consumer credit, the Government has implemented a number of measures intended to support the rehabilitation of the credit of delinquent consumer borrowers. These measures may affect the amount and timing of the Bank's collections and recoveries on its delinquent consumer credits.

The Credit Counseling and Recovery Service offers two programs for individual debtors, the pre-workout program and the individual workout program, both of which are available to individuals with total debt amounts of ₩1.5 billion or less (secured debt amount of ₩1 billion or less and unsecured debt amount of ₩500 million or less). The pre-workout program is offered to individuals whose delinquency period is between 31 days and 89 days (including those whose delinquency period is between one day and 30 days but with annual income of ₩40 million or less and cumulative delinquency period of 30 days or more within the year immediately preceding the application date), and the individual workout program is offered to individuals whose delinquency period is three months or more. When an individual debtor applies for the pre-workout or individual workout program, the Credit Counseling and Recovery Service will deliberate and resolve on a debt restructuring plan, and once the creditor financial institution that is in a credit recovery support agreement with the Credit Counseling and Recovery Service and holding the majority of each of the unsecured claims and secured claims to the relevant individual debtor agrees to such debt restructuring plan, the plan will be finalized and debt restructuring measures, such as extension of maturity, adjustment of interest rates or reduction of debt, will be taken according to the pre-workout program or individual workout program applied for.

Under the Debtor Rehabilitation and Bankruptcy Act, a qualified individual debtor with outstanding debts in an aggregate amount not exceeding threshold amounts of ₩500 million of unsecured debt and/or ₩1 billion of secured debt may restructure his or her debts through a court-supervised debt restructuring that is binding on creditors.

Once a borrower is deemed to be eligible to participate in the pre-workout program, the Bank promptly sells the collateral underlying such borrower's secured loans to mitigate its losses, and the Bank may restructure such borrower's unsecured loans (regardless of their type) as follows:

- *Extension of maturity*: Based on considerations of the type of loan, the total loan amount, the repayment amount and the probability of repayment, the maturity of unsecured loans may be extended by up to 10 years and maturity of secured loans may be extended by up to 20 years with a grace period not exceeding three years.

- *Interest rate adjustment*. The interest rate of the loan may be adjusted to 70% of the original interest rate or 5% per annum, whichever is higher; *provided that* if the original interest rate is less than 5% per annum, no adjustment applies. The adjusted interest rate applies to the principal amount following any adjustment thereto as part of the pre-workout program, and no interest accrues on the interest already accrued or fees payable.

- *Debt forgiveness*: Debt forgiveness under the pre-workout program is limited to (i) the default interest accrued prior to the application for the pre-workout program and (ii) the regular and default interest accrued following such application but before the approval of the program.

- *Deferral*: If the foregoing three measures are deemed to be insufficient in terms of providing meaningful assistance to a qualifying borrower due to layoff, unemployment, business closure, disaster or earnings loss, loan repayment may be deferred for a maximum of one year, *provided that* the pre-workout committee may extend such deferral period every six months, for a period not to exceed six months, upon the borrower's application. The deferral period is not counted toward the repayment period, and interest accrues at 3% per annum during the deferral period.

In 2017, 2018 and 2019, loans in the aggregate amounts of ₩34 billion, ₩67 billion and ₩106 billion were modified under the Bank's pre-workout program, respectively. All such modified loans became beneficiaries of maturity extension and interest rate reductions, while a substantially limited portion of such loans also became beneficiaries of debt forgiveness and deferral.

Under the guidelines of the FSC, Korean banks, including the Bank, operated since 2008 a fast track program which was a liquidity support program for small and medium-sized companies. As the fast track program ended as of December 31, 2016, the FSC implemented a swift financial assistance program for small and medium-sized companies for a period of five years beginning on January 1, 2017. Banks and other financial institutions participating in the program will, based on an evaluation of credit risks, provide financial assistance (including extension of maturity on existing obligations and lower interest rates) to small and medium-sized companies that are experiencing temporary liquidity crises but have a credit rating exceeding a certain threshold. In principle, the application of the swift financial assistance program to companies will be limited to three years, but such application may be extended, in consultation with the creditor financial institutions concerned, one time for an additional period of up to one year.

Loan Modification Programs for Loans Under Troubled Debt Restructuring

The Bank generally offers the following types of concessions in relation to restructured loans: reduction of interest rate, forgiveness of overdue interest, extension of the term for repayment of principal, conversion of debt into equity or a combination of the foregoing. The nature and degree of such concessions vary depending on, among other things, the creditworthiness of the borrower, the size of loans being restructured, the existing terms of the loans and other factors deemed relevant by the relevant creditors' committee. The Bank generally does not restructure an existing loan into multiple new loans.

The following table presents a breakdown of the gross amount of loans under restructuring as of December 31, 2017, 2018 and 2019 by the Bank's loan modification programs, as further categorized according to the loan category and performing versus non-performing status at each fiscal year end.

	December 31, 2017		
Modification Programs	**Non-Performing**	**Performing**	**Total**
	(in billions of Won)		
Extension of due date for principal and interest	₩ 82	₩—	₩ 82
Reduction of interest rate	351	27	378
Equity conversion	—	—	—
Additional lending[1]	—	6	6
Others[2]	151	16	167
Total:	₩584	₩49	₩633

	December 31, 2018		
Modification Programs	**Non-Performing**	**Performing**	**Total**
	(in billions of Won)		
Extension of due date for principal and interest	₩ —	₩ 79	₩ 79
Reduction of interest rate	8	250	258
Equity conversion	—	—	—
Additional lending[1]	—	—	—
Others[2]	37	54	91
Total:	₩ 45	₩ 383	₩ 428

Modification Programs	December 31, 2019 Non-Performing	Performing	Total
	(in billions of Won)		
Extension of due date for principal and interest	₩ —	₩ 76	₩ 76
Reduction of interest rate	45	208	253
Equity conversion	—	—	—
Additional lending[1]	—	2	2
Others[2]	50	32	82
Total:	₩ 95	₩ 318	₩ 413

Notes:

(1) Represents additional loans provided to the borrower at favorable terms as part of the restructuring package, which may include extension of the due date or reduction of interest rate, among others.

(2) Principally consists of restructured loans whose restructuring terms were not determined as of the date indicated. A loan is deemed to be subject to restructuring upon the commencement of the recovery proceedings or when the relevant creditors' committee or the Bank's credit officer determines that the borrower will be subject to workout, and in many cases the restructuring terms for such loans are not determined at the time such loans are deemed to be subject to restructuring.

Debt-to-equity Conversion

The Bank distinguishes between loans that it considers to be collectible under modified terms and loans that it considers to be uncollectible regardless of any modification of terms. With respect to loans that are in the latter category, it converts a portion of such loans into equity securities following negotiation with the borrowers and charge off the remainder of such loans as further described below. The equity securities so converted are recorded at fair value, based on the market value of such securities if available or the appraisal value of such securities by an outside appraiser if a market value is unavailable. In 2019, the Bank's loans restructured into equity securities amounted to ₩111 billion, which was subsequently charged off.

Debt-to-equity conversion generally has two primary benefits. One, the debt-to-equity conversion reduces the amount of loans and related interest expenses of the borrower, resulting in lesser debt burden and greater liquidity for the borrower, a greater likelihood of its exit from restructuring and the repayment of its obligations to the Bank. Two, in the case of a successful turnaround of the borrower, the Bank is entitled to the upside gains from the increase in the value of the equity securities so converted. Notwithstanding these benefits, however, the resulting impact from the debt-to-equity conversion on the Bank's interest income is generally not material as the loans being converted as part of restructuring are generally deemed to be uncollectible regardless any modification of terms. As for the impact on the Bank's asset classification, the Bank generally applies the same asset classification standards to both non-restructured and restructured loans. As for restructured loans, the Bank also considers additional factors such as the borrower's adherence to its business plans and execution of the self-help measures, among others, to the extent applicable. In consideration of such criteria, the Bank generally classifies loans subject to workout as "precautionary." For a general discussion of our loan classifications, see *"— Supervision and Regulation — Principal Regulations Applicable to Banks — Capital Adequacy*."

Evaluation of Loan Modification Programs

The Bank currently does not conduct a systematic or quantitative evaluation of the success of any particular concession by type, whether historically, relative to each other or relative to other financial institutions in Korea, although it does monitor on an individual basis the compliance by the borrower with the modified terms of the restructured loans. This is principally due to the following reasons.

One, in the case of large corporations subject to or about to be subject to restructuring, which represent the most significant restructuring cases in Korea, the restructuring process is generally not driven by the Bank, but by a creditors' committee involving several large creditor financial institutions, and in the case of very large corporations or corporations that are members of large business conglomerates, the process frequently involves the guidance of the Government in light of the potential ripple effects of the restructuring on the general economy. Hence, it is difficult for the Bank to collect data that would help it to evaluate the success of a particular concession based on the credit profile of the borrower and the type of concessions offered.

Two, the unavailability of systematic analysis notwithstanding the Bank's general sense is that the restructuring cases in Korea have, to a large part, been successful as measured in terms of the ability of the borrowers to exit restructuring programs relatively quickly and further that the failed cases have not been particularly material.

As a result, to date, the Bank has not found it particularly necessary or helpful to expend the time and resources required to conduct a systematic analysis for purposes of evaluating the success of concessions by the type of a particular concession offered.

The Bank does, however, measure the success of concessions in limited ways, that is, principally in terms of how well the borrower complies with the terms and conditions of the restructuring plan as agreed between the borrower and its creditor institutions. A restructuring plan typically includes a business plan and self-help measures to be undertaken by the borrower. The Bank monitors the borrower's compliance with the restructuring plan on a periodic basis (namely, annual, semiannual or quarterly in accordance with the terms of the restructuring plan) and evaluates the success thereof principally in terms of three attributes: (i) the progress in the execution of the business plan, (ii) the progress in the execution of the self-help measures and (iii) other qualitative factors such as major developments in the general economy, the regulatory environment, the competitive landscape, the quality of senior management and personnel and transparency in management. The Bank also closely monitors the cash inflows and outflows of the borrower, and the creditors' committee typically has the right to participate in decision-making related to major spending and borrowings by the borrower.

Accrual Policy for Restructured Loans

For purposes of the Bank's accrual policy, the Bank classifies restructured loans principally into (i) loans subject to workout pursuant to the Corporate Restructuring Promotion Act and (ii) loans subject to recovery proceedings pursuant to the Debtor Rehabilitation and Bankruptcy Act, which is the comprehensive bankruptcy-related law in Korea. See "— *Credit Exposures to Companies in Workout and Recovery Proceedings*." As for loans subject to workout, the Bank's general policy is to discontinue accruing interest on a loan when payment of principal and/or interest thereon becomes past due by 90 days or more, as described above in "— *Nonaccrual Loans and Past Due Accruing Loans*." Interest is recognized on these loans on a cash basis (i.e., when collected) from the date such loan is reclassified as non-accruing, and such loans are not reclassified as accruing until the overdue principal and/or interest amounts are paid in full. This general policy also applies to loans subject to workout even if such loans are restructured loans. In the case of loans subject to recovery proceedings, the Bank discontinues accruing interest immediately upon the borrowers becoming subject to recovery proceedings (even if such loans are not yet delinquent) in light of the heightened uncertainty regarding the borrower's ability to repay. Interest on such loans are recognized on a cash basis and such loans are not reclassified as accruing until the borrower exits recovery proceedings. Accordingly, under to the Bank's accrual policy, the number of payments made on a nonaccrual restructured loan is not a relevant factor in determining whether to reinstate such loan to the accrual status.

Determination of Performance of Restructured Loans

In determining whether a borrower has satisfactorily performed its obligations under the existing loan terms, the Bank principally reviews the payment history of the borrower, namely whether the borrower has been delinquent by one day or more pursuant to the Bank's general interest accrual policy. In determining whether a borrower has shown the capacity to continue to perform under the restructured terms, the Bank primarily relies upon the assessment of its credit officers (or the creditors' committee in the case of large corporate borrowers with significant outstanding loans) of the likelihood of the borrower's ability to repay under the restructured terms, which assessment takes into account the size of the loans in question, the credit profile of the borrower, the original terms of the loans and other factors deemed relevant by the relevant credit officers. Depending on various factors such as the size of the loans in question and the credit profile of the borrower, the Bank or the relevant creditors' committee, as the case may be, sometimes engages an outside advisory firm to perform further due diligence in order to supplement the aforementioned assessment. In certain cases, the borrowers also submit self-help proposals to facilitate obtaining the approval for restructuring, which measures are then also taken into consideration by the Bank's credit officers or the relevant creditors' committees, as the case may be, in determining their future capacity to continue to perform under the restructured terms.

Charge-off of Restructured Loans

As for loans that the Bank considers to be collectible under modified terms (for example, by extending the due date for the payment of principal and/or interest or reducing the interest rate below the applicable interest rate to a rate below the prevailing market rate, or a combination of the foregoing), it generally restructures such loans under the modified terms and does not charge off any portion of such loans.

As for loans that the Bank considers to be uncollectible regardless of any modification of terms, it negotiates with the borrower to have a portion of such loans converted into equity securities (usually common stock) of the borrower in consideration, among others, of (i) the degree to which such conversion will alleviate the debt burdens and liquidity concerns of the borrower, (ii) the Bank's potential upside from the gain in the value of the equity securities compared to the likelihood of collection if the loans were not converted into equity securities, and (iii) the borrower's concerns regarding its shareholding structure subsequent to such conversion. The Bank then charges off the remainder of the loans not so converted into equity securities. The value of the equity securities so converted is recorded at fair value, based on the market value of such securities if available or the appraisal value of such securities by an outside appraiser if a market value is unavailable.

Since the Bank generally does not accrue interest on loans subject to a recovery proceeding while it generally accrues interest on loans subject to workout unless past due by 90 days or more, charge-off is not a relevant factor the Bank considers when determining the accrual status of a particular restructured loan.

The Bank continues to accrue interest on restructured loans if it concludes that repayment of interest and principal contractually due on the entire debt is reasonably assured. Such conclusion is reached only after the Bank has carefully reviewed the borrower's ability to repay based on an assessment, among others, of various factors such as the size of the loans in question and the credit quality of the borrower by the Bank's credit officer or the relevant creditors' committee as supplemented by the due diligence by outside advisory firms, as the case may be.

Potential Problem Loans

The Bank operates an "early warning system" in order to enable a more systematic and real-time monitoring of loans with a significant potential of default. This system assists the Bank's management in making decisions by identifying loans which have serious doubt as to the ability of the borrowers to comply with their respective loan repayment terms as well as loans with significant potential of non-repayment.

The Bank classifies potential problem loans as loans that are designated as “early warning loans” and reported to the FSS. The “early warning loans” designation applies to borrowers that have been (i) identified by the Bank’s early warning system as exhibiting signs of credit risk based on the relevant borrower’s financial data, credit information and/or transactions with banks and, following such identification and (ii) designated by the Bank’s loan officers as potential problem loans on their evaluation of known information about such borrowers’ possible credit problems. Such loans are required to be reported on a quarterly basis to the FSS. If a borrower’s loans are designated as “early warning loans” pursuant to the process described above and included in the Bank’s quarterly report to the FSS, the Bank considers this to be an indication of serious doubt as to such borrower’s ability to comply with repayment terms in the near future. As of December 31, 2019, the Bank had ₩607 billion of potential problem loans.

Provisioning Policy

The Bank conducts periodic and systematic detailed reviews of its loan portfolios to identify credit risks and to establish the overall allowance for loan losses. The Bank’s management believes the allowance for loan losses reflects the best estimate of the expected credit losses as of the date of each statement of financial position.

At each reporting date, the Bank assesses whether the credit risk on a financial instrument has increased significantly since initial recognition. When making the assessment, the Bank uses the change in the risk of a default occurring over the expected life of the financial instrument instead of the change in the amount of expected credit losses. To make that assessment, the Bank compares the risk of default of the financial instrument as at the reporting date with such risk of default as at the date of initial recognition, taking into account reasonable supporting information that is available without undue cost or effort and is indicative of significant increases in credit risk since initial recognition. Supporting information also includes historical default data held by the Bank and analysis conducted by internal credit risk rating specialists.

The Bank assigns an internal credit risk rating to each individual exposure based on observable data and historical experiences that have been found to have a reasonable correlation with the risk of default. The internal credit risk rating is determined by considering both qualitative and quantitative factors that indicate the risk of default, which may vary depending on the nature of the exposure and the type of borrower.

The Bank accumulates information after analyzing the information regarding exposure to credit risk and default information by the type of product and borrower as well as results of internal credit risk assessment. For some portfolios, the Bank uses information obtained from external credit rating agencies when performing these analyses.

The Bank applies statistical techniques to estimate (i) the probability of default for the remaining life of the exposure from the accumulated data and (ii) the changes in the estimated probability of default over time.

The Bank uses the indicators defined as per portfolio to determine the significant increase in credit risk. Such indicators generally consist of changes in the risk of default estimated from changes in the internal credit risk rating, qualitative factors, days of delinquency and others.

The Bank considers a financial asset to be in default if it meets one or more of the following conditions:

- if a borrower is overdue 90 days or more from the contractual payment date, or

- if the Bank determines that it is not possible to recover principal and interest without enforcing the collateral on a financial asset.

The Bank uses the following indicators when determining whether a borrower is in default:

- qualitative factors (e.g., breach of contract terms),

- quantitative factors (e.g., if the same borrower does not perform more than one payment obligations to the Bank, the number of days past due per payment obligation. However, in the case of a specific portfolio, the Bank uses the number of days past due for each financial instrument), and

- internal and external data.

The definition of default applied by the Bank generally conforms to the definition of default defined for regulatory capital management purposes. However, depending on the situation, the information used to determine whether default has incurred and the extent thereof may vary.

The Bank measures expected credit losses on a forward-looking basis, and expected credit losses reflects information presented by internal experts based on a variety of sources. For purposes of estimating such forward-looking information, the Bank utilizes economic outlook and projections published by domestic and overseas research institutes or government and public agencies.

The Bank reflects future macroeconomic conditions anticipated from a bias-free, neutral standpoint in measuring expected credit losses. Expected credit losses in this respect reflect conditions that are most likely to occur and are based on the same assumptions that the Bank uses in its business plan and management strategy.

Key variables used in measuring expected credit losses are as follows:

- Probability of default (PD)

- Loss given default (LGD)

- Exposure at default (EAD)

These variables have been estimated from historical experience data by using statistical techniques developed internally by the Bank and have been adjusted to reflect forward-looking information. When measuring expected credit losses on financial assets, the Bank reflects a period of expected credit loss measurement based on a contractual maturity. The Bank takes into consideration the extension rights held by a borrower when deciding the contractual maturity.

Risk factors such as PD, LGD and EAD are collectively estimated according to the following criteria:

- Type of products,

- Internal credit risk rating,

- Type of collateral,
- Loan to value (LTV),
- Industry that the borrower belongs to,
- Location of the borrower or collateral, and
- Days of delinquency.

The criteria for classification of groups are periodically reviewed to maintain homogeneity of the group and are adjusted if necessary. The Bank uses external benchmark information to supplement internal information for a particular portfolio that does not have sufficient internal data accumulated from the past experience. See "*— Critical Accounting Policies — Expected credit loss on financial assets*."

Loan Aging Schedule

The following table shows the Bank's loan aging schedule (excluding accrued interest) for all loans as of the dates indicated.

	Current		Past Due Up to 3 Months		Past Due 3-6 Months		Past Due More Than 6 Months		Total
As of	Amount	%	Amount	%	Amount	%	Amount	%	Amount
	(in billions of Won, except percentages)								
December 31, 2017	231,658	99.50	686	0.30	168	0.07	300	0.13	232,812
December 31, 2018	251,813	99.51	788	0.31	201	0.08	257	0.10	253,059
December 31, 2019	268,500	99.42	958	0.36	226	0.08	387	0.14	270,071

Non-Performing Loans

Non-performing loans are defined as loans past due by more than 90 days. The following table shows, as of the dates indicated, the amount of the total non-performing loan portfolio and as a percentage of the Bank's total loans.

	As of December 31,		
	2017	2018	2019
	(in billions of Won, except percentages)		
Total non-performing loans	₩ 468	₩ 458	₩ 613
As a percentage of total loans	0.20%	0.18%	0.23%

Analysis of Non-Performing Loans

The following table sets forth, for the periods indicated, the total non-performing loans by the borrower type.

	As of December 31,								
	2017			2018			2019		
	Total Loans	Non-Performing Loans[1]	Ratio of Non-Performing Loans	Total Loans	Non-Performing Loans[1]	Ratio of Non-Performing Loans	Total Loans	Non-Performing Loans[1]	Ratio of Non-Performing Loans
	(in billions of Won, except percentages)								
Corporate	₩ 129,088	₩254	0.20%	₩140,361	₩ 219	0.16%	₩146,699	₩340	0.23%
Retail	103,724	214	0.21	112,698	239	0.21	123,372	273	0.22
Total	₩ 232,812	₩468	0.20%	₩253,059	₩ 458	0.18%	₩270,071	₩613	0.23%

Note:

(1) Includes unsecured loans past due by more than six months.

Non-Performing Loans by Industry

The following table sets forth a breakdown of the Bank's non-performing corporate loans by industry as of December 31, 2019.

Industry	Aggregate Non-Performing Corporate Loan Balance	Percentage of Total Non-Performing Corporate Loan Balance
	(in billions of Won)	*(Percentages)*
Real estate, leasing and service	20	5.9%
Construction	8	2.4
Manufacturing	173	50.9
Retail and wholesale	47	13.8
Finance and insurance	—	—
Transportation, storage and communication	8	2.4
Hotel and leisure	11	3.2
Other service[1]	69	20.3
Other[2]	4	1.1
Total	340	100.0%

Notes:

(1) Includes other service industries such as publication, media and education.

(2) Includes other industries such as agriculture, forestry, mining, electricity and gas.

Top 20 Non-Performing Loans

As of December 31, 2019, the Bank's 20 largest non-performing loans accounted for 21.2% of its total non-performing loan portfolio. The following table shows, at the date indicated, certain information regarding the Bank's 20 largest non-performing loans.

		As of December 31, 2019		
		Industry	**Gross Principal Outstanding**	**Allowance for Loan Losses**
			(in billions of Won)	
1	Borrower A	Manufacturing	₩ 23	₩ 2
2	Borrower B	Manufacturing	18	—
3	Borrower C	Other service	16	4
4	Borrower D	Retail and wholesale	13	13
5	Borrower E	Manufacturing	6	1
6	Borrower F	Other service	5	—
7	Borrower G	Other service	4	1
8	Borrower H	Manufacturing	4	—
9	Borrower I	Other service	4	—
10	Borrower J	Manufacturing	4	1
11	Borrower K	Manufacturing	4	—
12	Borrower L	Manufacturing	4	2
13	Borrower M	Real estate, leasing and service	4	1
14	Borrower N	Other service	3	1
15	Borrower O	Retail and wholesale	3	2
16	Borrower P	Manufacturing	3	3
17	Borrower Q	Transportation, storage, and communication	3	—
18	Borrower R	Other service	3	1
19	Borrower S	Manufacturing	3	1
20	Borrower T	Manufacturing	3	1
			₩130	₩34

Non-Performing Loan Strategy

One of the Bank's primary objectives is to prevent its loans from becoming non-performing. Through the Bank's corporate credit rating system, which is designed to prevent the Bank's loan officers from extending new loans to borrowers with high credit risks based on the borrower's credit rating, the Bank seeks to reduce credit risk related to future non-performing loans. The Bank's early warning system is designed to bring any sudden increase in a borrower's credit risk to the attention of its loan officers, who then closely monitor such loans.

If a loan becomes non-performing notwithstanding such preventive mechanism, an officer at the branch level responsible for monitoring non-performing loans will commence due diligence on the borrower's assets, send a notice demanding payment or a notice that the Bank will take or prepare for legal action.

At the same time, the Bank also initiates its non-performing loan management process, which includes:

- identifying loans subject to a proposed sale by assessing the estimated losses from such sale based on the estimated recovery value of collateral, if any, for such non-performing loans;
- identifying loans subject to charge-off based on the estimated recovery value of collateral, if any, for such non-performing loans and the estimated rate of recovery of unsecured loans; and
- to a limited extent, identifying commercial loans subject to normalization efforts based on the cash-flow situation of the borrower.

Once the details of a non-performing loan are identified, the Bank pursues early solutions for recovery. Actual recovery efforts for non-performing loans are handled by the relevant department, depending on the nature of such loans and the borrower, among others.

The officers or agents of the responsible departments and units use a variety of methods to resolve non-performing loans, including:

- making phone calls and paying visits to the borrower to request payment;
- continuing to assess and evaluate assets of the Bank's borrowers; and
- if necessary, initiating legal action such as foreclosures, attachment and litigation.

In order to promote speedy recovery on loans subject to foreclosures and litigation, the branch responsible for handling these loans may transfer them to the relevant unit at headquarters.

The Bank's policy is to commence legal action within one month after default on promissory note and four months after delinquency of payment on other types of loans. For loans to insolvent or bankrupt borrowers or when the Bank concludes that it is not possible to recover through normal procedures, the Bank takes prompt legal actions regardless of the grace period.

In addition to making efforts to collect on these non-performing loans, the Bank also takes other measures to reduce the level of its non-performing loans, including:

- selling non-performing loans to third parties including the Korea Asset Management Corporation;
- entering into asset-backed securitization transactions with respect to non-performing loans;
- managing retail loans that are three months or more past due through Shinhan Credit Information under an agency agreement; and
- using third-party collection agencies including credit information companies.

In 2019, the Bank sold non-performing loans in the amount of ₩39 billion to third parties, including ₩28 billion transferred to JB Woori Capital Co., Ltd., an investment management company. Loans transferred to third parties generally meet the criteria of true sale and are derecognized accordingly.

The following table presents a roll-forward of the Bank's nonperforming loans in 2019.

	(in billions of Won)
Non-performing loans as of December 31, 2018	₩458
Additional non-performing loans due to delinquency	205
Loans sold	(39)
Loans charged off	(2)
Loans modified and returned to performing	—
Other adjustments(1)	(9)
Non-performing loans as of December 31, 2019	₩613

Note:

(1) Represents loans paid down or paid off and loans returned to performing other than as a result of modification. The Bank does not separately collect and analyze data relating to non-performing loans other than those that were sold, charged off, modified and returned to performing, or transferred to held-for-sale investment portfolio.

Allocation of Allowance for Loan Losses

The following table presents, as of the dates indicated, the allocation of the Bank's loan loss allowance by loan type.

	As of December 31,					
	2017		2018		2019	
	Amt.	Loans as % of Total Loans	Amt.	Loans as % of Total Loans	Amt.	Loans as % of Total Loans
	(in billions of Won, except percentages)					
Corporate	₩1,209	80.3%	₩1,366	81.5%	₩1,229	80.5%
Retail	298	19.7	310	18.5	298	19.5
Total allowance for loan losses	₩1,507	100.0%	₩1,676	100.0%	₩1,527	100.0%

The Bank's total allowance for loan losses decreased by ₩149 billion, or 8.9%, to ₩1,527 billion as of December 31, 2019 from ₩1,676 billion as of December 31, 2018, primarily due to an increase in the sale and transfer of debt securities as well as an increase in the sale, transfer and charge-offs of non-performing loans.

The Bank's total allowance for loan losses increased by ₩169 billion, or 11.2%, to ₩1,676 billion as of December 31, 2018 from ₩1,507 billion as of December 31, 2017, primarily due to the replacement of the model for impairment loss from the "incurred loss" model under the previous guidance to the "expected credit loss" model under K-IFRS 1109 adopted from January 1, 2018, which requires the Bank to recognize impairment loss earlier and on a more forward-looking basis. See "*Risk Factors — Risks Relating to the Bank's Business — The implementation of K-IFRS 1109 has caused the Bank to increase its allowance for impairment losses to cover expected credit loss on its loan portfolio and other financial instruments and may increase volatility in the Bank's profit or loss*."

Analysis of Allowance for Loan Losses

The following table presents an analysis of the Bank's loan loss experience for each of the periods indicated.

	For the year ended December 31,		
	2017	2018	2019
	(in billions of Won, except percentages)		
Balance at the beginning of the period	₩1,456	₩1,870	₩1,676
Amounts charged against income	482	246	371
Gross charge-offs:			
Corporate	(261)	(277)	(235)
Retail	(127)	(207)	(226)
Total gross charge-offs	(388)	(484)	(461)
Recoveries:			
Corporate	75	63	45
Retail	41	49	59
Total recoveries	116	112	104
Net charge-offs	(272)	(372)	(357)
Allowance related to loan transferred	(60)	(59)	(48)
Other	(99)	(9)	(115)
Balance at the end of the period	₩1,507	₩1,676	₩1,527
Ratio of net charge-offs during the period to average loans outstanding during the period	0.12%	0.15%	0.14%

Loan Charge-offs

The Bank's gross charge-offs decreased by 5% to ₩461 billion in 2019 from ₩484 billion in 2018, primarily due to a decrease in the amount of charge-offs for corporate loans in 2019 compared to 2018. The Bank's gross charge-offs increased by 24.7% to ₩484 billion in 2018 from ₩388 billion in 2017, primarily due to an increase in the amount of charge-offs for retail loans in 2018 compared to 2017.

In 2019, the charge-off on restructured loans amounted to ₩134 billion, of which ₩226 billion was related to loans converted into equity securities as part of restructuring. In 2018, the charge-off on restructured loans amounted to ₩59 billion, of which ₩67 billion was related to loans converted into equity securities as part of restructuring. With respect to a loan that the Bank considers to be uncollectible regardless of any modification of terms, the Bank converts a portion of such loan into equity securities following negotiation with the borrower and charge off the remainder of such loan as previously discussed in *"— Troubled Debt Restructurings — Charge-off of Loans Subject to Restructuring."* The equity securities so converted are recorded at fair value, based on the market value of such securities if available or the appraisal value of such securities by an outside appraiser if a market value is unavailable.

Basic Principles

The Bank attempts to minimize loans to be charged off, by practicing a sound credit approval process based on credit risk analysis prior to extending loans and a systematic management of outstanding loans.

Loans to be Charged-off

Loans are charged off if they are deemed to be uncollectible by falling under any of the following categories:

- loans for which collection is not foreseeable due to insolvency or bankruptcy, dissolution or the termination of the debtor's business;
- loans for which collection is not foreseeable due to the death or disappearance of debtors;
- loans for which collection expenses exceed the collectable amount;
- loans for which collection is not possible through legal or any other means;
- payments outstanding on unsecured retail loans that are overdue for more than 12 months;
- payments in arrears in respect of leases that are overdue for more than 12 months;
- the portion of loans classified as "estimated loss," net of any recovery from collateral, which is deemed to be uncollectible; or

domestic loans that are required by the FSS to be charged-off, or loans held by the Bank's foreign subsidiaries or branches for which a charge-off or special provisioning is required by the relevant regulatory authority.

Timeline for Charge-off

Loans to be charged-off must be charged-off within one year of the month they are deemed to be uncollectible. If such loans are not charged-off within one year, the reason for the delay must be reported to the Bank's Audit Department.

Procedure for Charge-off Approval

An application for the Bank's loans to be charged-off is submitted by the relevant branch or department to the Credit Collection Department. The Credit Collection Department refers the application to the Audit Department for their review to ensure compliance with the Bank's internal procedures for charge-offs. The Credit Collection Department, after reviewing the application to confirm that it meets relevant requirements, seeks approval from the FSS for the charge-offs, which is typically granted. Once the FSS approves (except for household loans with estimated losses of ₩10 million or less, whose charge-off is considered automatically approved by the FSS), loans are charged-off upon approval by the President of the Bank.

Treatment of Loans Charged-off

Once loans are charged off, they are derecognized from the Bank's statements of financial position and are classified as charged-off loans. The Bank continues collection efforts in respect of these loans through third-party collection agencies. The General Manager of the Credit Collection Department must report to the FSS the amounts of loans permanently written off or recovered during each reporting period.

Treatment of Collateral

When the Bank determines that a loan collateralized by real estate cannot be recovered through normal collection channels, the Bank generally petitions a court to foreclose and sell the collateral through a court-supervised auction within one month after default and insolvency and within four months after delinquency. However, this procedure does not apply to companies under restructuring, recovery proceedings, workout or other court proceedings where there are restrictions on such auction procedures. Filing of such petition with the court generally encourages the debtor to repay the overdue loan. If a debtor ultimately fails to repay and the court grants its approval for foreclosure, the Bank will sell the collateral and recover the principal amount and interest accrued up to the sales price, net of expenses incurred from the auction. Foreclosure proceedings under the laws and regulations of Korea typically take seven months to one year from initiation to collection depending on the nature of the collateral.

Financial Statement Presentation

The Bank's financial statements generally report as charge-offs all unsecured retail loans that are overdue for more than 12 months. Leases are charged off when past due for more than twelve months. For collateral dependent loans, the Bank charges off the excess of the book value of the subject loan over the amount received or to be received from the sale of the underlying collateral when the collateral is sold as part of a foreclosure proceeding and its sale price becomes known through court publication as part of such proceeding.

Credit Types

The following table sets forth, as of the dates indicated, the Bank's credit portfolio on a separate basis as reported to the FSS pursuant to FSS regulations, which consists principally of the following:

- loans net of present value discounts and excluding certain items, principally interbank loans, call loans and securities purchased under resale agreements;

- confirmed guarantees and acceptances, which are off-balance sheet items, and loans from the Bank's trust accounts whose principal and/or interest are guaranteed by the Bank; and

- certain other items, principally merchant bank credits and suspense receivables.

	As of December 31,		
	2017	2018	2019
	(in billions of Won)		
Loans in Won	₩194,701	₩208,767	₩224,179
Loans in foreign currencies	7,964	9,622	11,905
Bills bought in foreign currencies	7,085	6,961	6,535
Privately placed bonds	290	412	310
Merchant banking loans	496	410	686
Trust account loans	469	528	415
Factoring receivables	155	115	224
Advances under guarantees and acceptances	8	10	13
Total loans[1]	₩211,168	₩226,825	₩244,267
Other credits:			
Guarantees and acceptances	₩ 8,061	₩ 9,729	₩9,777
Suspense receivables as credit	1	1	2
Total credits	₩219,230	₩236,555	₩254,046

Note:

(1) For purposes of calculating total credits as reported to the FSC, total loans are stated net of present value discounts, and certain loan items (consisting of interbank loans, call loans and securities purchased under resale agreements) are excluded from total loans.

Substandard or Below Credits

Substandard or below credits are defined as those credits that are classified as substandard or below based on the FSC's asset classification criteria.

The following table shows as of the dates indicated, certain details regarding the asset quality of the Bank's credits on a separate basis, net of present value discounts, including its substandard or below credits, as reported to the FSC.

	As of December 31,		
	2017	2018	2019
	(in billions of Won, except percentages)		
Credits:			
Normal	₩ 216,940	₩ 234,335	₩ 251,969
Precautionary	1,084	1,167	960
Substandard	462	424	566
Doubtful	363	334	217
Estimated loss	381	313	353
Total credits	₩ 219,230	₩ 236,573	₩ 254,065
Total substandard or below credits	₩ 1,206	₩ 1,071	₩ 1,136
Precautionary and substandard or below credits	2,290	2,238	2,096
Allowance for credit losses(1)(2)	2,915	3,111	3,128
Substandard or below credits as a percentage of total credits	0.55%	0.45%	0.45%
Precautionary and substandard or below credits as a percentage of total credits	1.04%	0.95%	0.82%
Allowance for credit losses as a percentage of substandard or below credits	241.71%	290.48%	275.35%
Allowance for credit losses as a percentage of total credits	1.33%	1.32%	1.23%

Notes:

(1) Allowance for credit losses consists of allowance for loan losses, allowance for suspense receivables, allowance for acceptances and guarantees and regulatory reserve for loan loss in accordance with Article 29 of the Regulation on Supervision of Banking Business.

(2) Excludes allowance for credit commitments and regulatory reserve for loan loss with regard to credit commitments.

Trust Accounts

Under Korean law, assets accepted in trust accounts by the Bank are segregated from other assets of the Bank and are not available to satisfy the claims of the depositors or other creditors of the Bank. Accordingly, the Bank's trust assets and liabilities (other than those which are guaranteed as to principal (or as to both principal and interest)) are accounted for and reported separately from the bank accounts.

The following table sets forth the assets and liabilities of the Bank's trust accounts as of the dates indicated.

	As of December 31,		
	2017	2018	2019
	(in billions of Won, except percentages)		
Assets:			
Loans	₩ 469	₩ 528	₩ 415
Securities	16,870	22,479	23,902
Loans to bank accounts	3,504	2,174	4,353
Other[(1)]	37,694	50,981	64,458
Allowance for valuation of receivables	(1)	(1)	(1)
Total assets	₩58,536	₩76,161	₩93,127
Liabilities:			
Money trusts	₩37,700	₩44,290	₩49,694
Property trusts	19,813	30,836	42,149
Special reserves	105	109	114
Other	918	926	1,170
Total liabilities	₩58,536	₩76,161	₩93,127

Note:

(1) Includes principally real estate assets received under property trusts.

The Bank provides guarantees as to principal and/or interest for a limited amount of the assets and liabilities of its trust accounts. As of December 31, 2019, guaranteed fixed rate trust accounts, for which the Bank guarantees a fixed rate of interest, for 0.002% of the total money trusts in the Bank's trust accounts. As of December 31, 2019, the aggregate amount of money trusts guaranteed as to principal or as to principal and interest was ₩4,068 billion, or 8.19% of total money trusts for the Bank.

Money trusts for which the Bank provides guarantees as to principal and both principal and interest are consolidated under K-IFRS. The following table sets forth the assets and liabilities of the money trusts for which the Bank provides guarantees as to principal and both principal and interest and such money trusts as a percentage of the Bank's total trust assets:

	As of December 31,		
	2017	2018	2019
	(in billions of Won)		
Assets	₩4,471	₩4,522	₩4,603
Liabilities	₩4,471	₩4,522	₩4,603
As a percentage of total trust assets	7.64%	5.94%	4.94%

Investment Portfolio

Investment Policy

The Bank invests in and trades Won-denominated and, to a lesser extent, foreign currency-denominated securities for its own account in order to:

- maintain the stability and diversification of the Bank's assets;
- maintain adequate sources of back-up liquidity to match the Bank's funding requirements; and
- supplement income from the Bank's core lending activities.

When making an investment decision with respect to particular securities, the Bank considers macroeconomic trends, industry analysis and credit evaluation, among others.

The Bank's securities investment activities are subject to a number of regulatory guidelines, including limitations prescribed under the Banking Act. Under these regulations, the Bank must limit its investments in shares and securities with a maturity in excess of three years (other than monetary stabilization bonds issued by the Bank of Korea and national government bonds) to 100.0% of the sum of Tier I and Tier II capital (less any deductions) of the Bank. Generally, the Bank is also prohibited from acquiring more than 15.0% of the shares with voting rights issued by any other corporation (other than for the purpose of establishing or acquiring a subsidiary). Further information on the regulatory environment governing the Bank's investment activities is set out in "*Supervision and Regulation — Principal Regulations Applicable to Banks — Restrictions on Shareholdings in Other Companies*."

Book Value and Market Value

The following tables set out the book value and market value of investments in the Bank's investment portfolio as of the dates indicated.

	As of December 31,			
	2018		2019	
	Book Value	Market Value	Book Value	Market Value
	(in billions of Won)			
Securities at fair value through other comprehensive income:				
Equity securities	₩ 443	₩ 443	₩ 595	₩ 595
Debt securities:				
Government bonds	7,713	7,713	10,482	10,482
Financial bonds	15,404	15,404	18,268	18,268
Corporate bonds and others	8,318	8,318	11,311	11,311
Total — Securities at fair value through other comprehensive income	₩31,878	₩31,878	₩40,656	₩40,656
Securities at amortized cost:				
Debt securities:				
Government bonds	11,694	11,793	12,569	12,819
Financial bonds	929	931	3,377	3,386
Corporate bonds	4,126	4,166	4,139	4,193
Others	75	75	167	167
Total — Securities at amortized cost	₩16,824	₩16,965	₩20,252	₩20,565
Securities at fair value through profit or loss:				
Equity securities	123	123	113	113
Debt securities:				
Government bonds	777	777	1,084	1,084
Financial bonds	2,506	2,506	3,992	3,992
Corporate bonds	1,689	1,689	2,718	2,718
Bills bought	4,196	4,196	3,121	3,121
CMA	3,002	3,002	3,724	3,724
Others	3,164	3,164	3,852	3,852
Gold/silver deposits	155	155	112	112
Total — Securities at fair value through profit or loss	₩15,612	₩15,612	₩18,716	₩18,716
Total securities	₩64,314	₩64,455	₩79,624	₩79,937

	As of December 31,	
	2017	
	Book Value	Market Value
Available-for-sale financial assets:		
Equity securities	₩ 2,537	₩ 2,537
Debt securities:		
Government bonds	6,075	6,075
Financial institutions bonds	15,778	15,778
Corporate bonds	8,094	8,094
Other	12	12
Sub-total	29,959	29,959
Total available-for-sale	₩32,496	₩32,496
Held-to-maturity financial assets:		
Debt securities:		
Government bonds	9,808	9,813
Financial institutions bonds	1,225	1,223
Corporate bonds	3,790	3,786
Total held-to-maturity	₩14,823	₩14,822
Trading assets:		
Equity securities	521	521
Debt securities:		
Government bonds	856	856
Financial institutions bonds	2,302	2,302
Corporate bonds	1,484	1,484
Bills bought	2,678	2,678
CMA	3,157	3,157
Others	29	29
Sub-total	11,027	11,027
Gold/Silver deposits	189	189
Total trading	₩11,216	₩11,216
Total securities	₩58,535	₩58,534

Maturity Analysis

The following table categorizes the Bank's securities by maturity and weighted average yield as of December 31, 2019.

	As of December 31, 2019									
	1 Year or Less		Over 1 but within 5 Years		Over 5 but within 10 Years		Over 10 Years		Total	
	Carrying Amount	Weighted Average Yield(1)	Carrying Amount	Weighted Average Yield(1)	Carrying Amount	Weighted Average Yield(1)	Carrying Amount	Weighted Average Yield(1)	Carrying Amount	Weighted Average Yield(1)
	(in billions of Won, except percentages)									
Securities at fair value through other comprehensive income:										
Government bonds	₩ 2,804	1.91%	₩ 6,297	1.68%	₩1,199	1.81%	₩ 182	6.90%	₩10,482	1.85%
Financial bonds	8,962	1.73	9,024	1.71	167	2.80	114	8.08	18,267	1.77
Corporate bonds and others	4,022	1.94	6,929	2.10	360	2.52	—	—	11,311	2.06
Total	₩15,788	1.82%	₩22,250	1.83%	₩1,726	2.05%	₩ 296	7.36%	₩40,060	1.87%
Securities at amortized cost:										
Government bonds	₩ 1,895	2.40%	₩10,343	2.06%	₩ 139	3.12%	₩ 192	7.33%	₩12,569	2.20%
Financial bonds	1,932	1.59	1,165	1.91	38	2.80	242	6.62	3,377	2.07
Corporate bonds	1,005	2.20	2,591	2.37	515	2.36	28	2.76	4,139	2.33
Others	—	—	—	—	—	—	167	7.16	167	7.16
Total	₩ 4,832	2.03%	₩14,099	2.10%	₩ 692	2.54%	₩ 629	6.81%	₩20,252	2.25%
Securities at fair value through profit or loss										
Government bonds	₩ 101	2.03%	₩ 562	1.71%	₩ 421	1.52%	₩ —	—%	₩ 1,084	1.67%
Financial bonds	1,638	2.07	2,273	1.67	16	2.66	65	2.22	3,992	1.85
Corporate bonds	1,482	2.00	1,182	2.14	54	2.86	—	—	2,718	2.08
Bills bought	3,121	2.04	—	—	—	—	—	—	3,121	2.04
CMA	3,703	1.85	20	1.47	—	—	—	—	3,723	1.85
Others	3,358	0.04	420	—	—	—	74	—	3,852	0.04
Total	₩13,403	1.49%	₩ 4,457	1.64%	₩ 491	1.70%	₩ 139	1.03%	₩18,490	1.53%
Total debt securities	₩34,023	1.72%	₩40,806	1.90%	₩2,909	2.11%	₩1,064	6.21%	₩78,802	1.89%

Note:

(1) The weighted-average yield for the portfolio represents the yield to maturity for each individual security, weighted using its amortized cost.

Concentrations of Risk

The following table presents securities held by the Bank whose aggregate book value exceeded 10% of the Bank's stockholders' equity as of December 31, 2019, which was ₩2,609 billion as of such date.

	As of December 31, 2019	
	Book Value	Market Value
	(in billions of Won)	
Name of Issuer:		
Korean Government	₩21,244	₩21,413
Bank of Korea	6,889	6,893
Korea Housing Finance Corp	5,124	5,159
Korea Development Bank	4,486	4,488
Industrial Bank of Korea	3,931	3,931
Total	₩41,674	₩41,884

All of the above entities (other than the Government) are either an agency of the Government or an entity controlled by the Government.

Credit-Related Commitments and Guarantees

In the normal course of its operations, the Bank makes various commitments and guarantees to meet the financing and other business needs of its customers. Commitments and guarantees are usually in the form of, among others, commitments to extend credit, commercial letters of credit, standby letters of credit and performance guarantees. The contractual amount of these financial instruments represents the maximum possible loss amount if the account party draws down the commitment or the Bank should fulfill its obligation under the guarantee and the account party fails to perform under the contract.

The following table sets forth the Bank's credit-related commitments and guarantees as of the dates indicated.

	As of December 31,		
	2017	2018	2019
	(in billions of Won)		
Commitments to extend credit	₩72,332	₩ 89,093	₩ 94,585
Commercial letters of credit	2,739	3,161	2,759
Others(1)	19,412	22,029	21,447
Total	₩94,483	₩114,283	₩118,791

Note:

(1) Consists of financial guarantees, performance guarantees, liquidity facilities to special purpose entities, acceptances, guarantee on trust accounts and endorsed bills.

The Bank has credit-related commitments that are not reflected on the Bank's statements of financial position, which primarily consist of commitments to extend credit and commercial letters of credit. Commitments to extend credit, including credit lines, represent unfunded portions of authorizations to extend credit in the form of loans. These commitments expire on fixed dates and a customer is required to comply with predetermined conditions to draw funds under the commitments.

Commercial letters of credit are undertakings on behalf of customers authorizing third parties to make drawdowns up to a stipulated amount under specific terms and conditions. They are generally short-term and collateralized by the underlying shipments of goods to which they relate.

The Bank also has guarantees that are recorded on the Bank's statements of financial position at their fair value at inception which are amortized over the life of the guarantees. Such guarantees generally include standby letters of credit, other financial and performance guarantees and liquidity facilities to special purpose entities.

Standby letters of credit are irrevocable obligations to pay third-party beneficiaries when the Bank's customers fail to repay loans or debt instruments, which are generally in foreign currencies. A substantial portion of these standby letters of credit are secured by collateral, including trade-related documents.

Other financial and performance guarantees are irrevocable assurances that the Bank will pay beneficiaries if its customers fail to perform their obligations under certain contracts. Liquidity facilities to special purpose entities represent irrevocable commitments to provide contingent liquidity credit lines to special purpose entities established by the Bank's customers in the event that a triggering event such as shortage of cash occurs.

The commitments and guarantees do not necessarily represent the Bank's exposure since they often expire unused.

Derivatives

As discussed under "*Business — Business Overview — The Bank's Principal Activities — Other Banking Services — Derivatives Trading*" above, the Bank engages in derivatives trading activities primarily on behalf of its customers so that they may hedge their risks and also enters into back-to-back derivatives with other financial institutions to cover exposures arising from such transactions. In addition, the Bank enters into derivatives transactions to hedge against risk exposures arising from its own assets and liabilities, some of which are non-trading derivatives that do not qualify for hedge accounting treatment.

The following table shows, as of December 31, 2017, 2018 and 2019, the gross notional or contractual amounts of derivatives held or issued for (i) trading and (ii) non-trading that qualify for hedge accounting.

	As of December 31, 2017			As of December 31, 2018			As of December 31, 2019		
	Underlying Notional Amount[(1)]	Estimated Fair Value Assets	Estimated Fair Value Liabilities	Underlying Notional Amount[(1)]	Estimated Fair Value Assets	Estimated Fair Value Liabilities	Underlying Notional Amount[(1)]	Estimated Fair Value Assets	Estimated Fair Value Liabilities
	(in billions of Won)								
Trading:									
Foreign exchange derivatives:									
Future and forward contracts	₩ 86,989	₩1,598	₩1,433	₩126,118	₩ 848	₩ 778	₩119,696	₩1,232	₩ 950
Swaps	29,690	830	865	31,104	394	374	38,593	467	517
Options	1,157	12	12	1,943	8	12	2,743	9	9
Sub-total	117,836	2,440	2,310	159,165	1,250	1,164	161,032	1,708	1,476
Interest rate derivatives:									
Future and forward contracts	400	—	—	295	—	—	292	—	—
Swaps	56,469	149	161	64,010	191	133	75,450	229	202
Options	—	—	—	—	—	—	80	1	—
Sub-total	56,869	149	161	64,305	191	133	75,822	230	202
Equity derivatives:									
Options	455	4	2	396	—	2	335	3	6
Future contracts	6	—	—	30	—	—	15	—	—
Sub-total	461	4	2	426	—	2	350	3	6
Commodity derivatives:									
Swaps and forward contracts	129	1	—	157	2	—	175	5	—
Sub-total	129	1	—	157	2	—	175	5	—
Total	₩175,295	₩2,594	₩2,473	₩224,053	₩1,443	₩1,299	₩237,379	₩1,946	₩1,684
Non-trading:									
Interest rate derivatives:									
Swaps	₩ 7,948	₩ 8	₩ 519	₩ 9,378	₩ 35	₩ 467	₩ 9,372	₩ 154	₩ 210
Foreign exchange derivatives:									
Future and forward contracts	214	2	2	224	6	6	231	2	—
Total	₩ 8,162	₩ 10	₩ 521	₩ 9,602	₩ 41	₩ 473	₩ 9,603	₩ 156	₩ 210

Note:

(1) Notional amounts in foreign currencies were converted into Won at prevailing exchange rates as of December 31, 2017, 2018 and 2019.

Funding

For the Bank's banking activities, the Bank obtains funding from a variety of sources, both domestic and foreign. The Bank's principal source of funding is customer deposits obtained from its banking operations. In addition, the Bank acquires funding through call money, borrowings from the Bank of Korea, other short-term borrowings, corporate debentures and other long-term debt, including debt and equity securities issuances, asset-backed securitizations and repurchase transactions, to complement, or, if necessary, replace funding through customer deposits. See "*Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources*."

Deposits

Although the majority of the Bank's bank deposits are short-term, the majority of the Bank's depositors have historically rolled over their deposits at maturity, providing its banking operations with a stable source of funding.

The following table shows the average balances of the Bank's deposits and the average rates paid on the Bank's deposits for the periods indicated.

	For the Year Ended December 31,					
	2017		2018		2019	
	Average Balance(1)	Average Rate Paid	Average Balance(1)	Average Rate Paid	Average Balance(1)	Average Rate Paid
	(in billions of Won, except percentages)					
Interest-bearing deposits:						
Demand deposits	₩ 33,981	0.35%	₩ 35,535	0.39%	₩ 38,233	0.42%
Time and savings deposits	186,305	1.16	200,669	1.35	220,004	1.45
Other deposits	8,048	1.57	8,459	1.96	9,277	2.07
Total interest-bearing deposits	₩228,334	1.06%	₩244,663	1.23%	₩267,514	1.32%

Note:

(1) Based on average daily balances.

For a breakdown of deposit products, see "*Business — Business Overview — The Bank's Principal Activities — Deposit-taking Activities*," except that cover bills sold are recorded on short-term borrowings and securities sold under repurchase agreements are recorded as secured borrowings.

Certificates of Deposit and Other Time Deposits

The following table presents the certificates of deposit and other time deposits in excess of ₩100 million by remaining maturities as of December 31, 2019.

	As of December 31, 2019		
	Certificates of Deposit	Other Time Deposits	Total
	(in billions of Won)		
Maturing within three months	₩3,775	₩ 36,504	₩ 40,279
After three but within six months	2,238	24,112	26,350
After six but within 12 months	3,295	40,066	43,361
After 12 months	105	6,857	6,962
Total	₩9,413	₩107,539	₩116,952

A majority of the Bank's certificates of deposit accounts and other time deposits issued by its foreign offices is in the amount of US$100,000 or more.

Short-term Borrowings

The following table presents information regarding the Bank's short-term borrowings (borrowings with an original maturity of one year or less) for the periods indicated.

	As of and for the year ended December 31, 2017				
	Balance Outstanding	Average Balance Outstanding(1)	Highest Balances at Any Month-end	Weighted Average Interest Rate(2)	Year-end Interest Rate
	(in billions of Won, except for percentages)				
Borrowings from:					
Bank of Korea(3)	₩2,874	₩2,859	₩ 2,938	0.67%	0.50 - 0.75%
Call money	562	1,484	3,512	1.79	0.00 - 6.20
Other short-term borrowings(4)	6,335	5,111	6,512	1.14	0.00 - 9.25
	₩9,771	₩9,454	₩12,962	1.10%	

Notes:

(1) Average balances are based on (a) daily balances of the Bank and (b) quarterly balances for the Bank's affiliates.

(2) Weighted-average interest rates are calculated by dividing the total interest expenses by the average amount borrowed.

(3) Borrowings from the Bank of Korea generally mature within one month for borrowings in Won and six months for borrowings in foreign currencies.

(4) Other short-term borrowings included borrowings from trust accounts, bills sold, and borrowings in domestic and foreign currencies.

	As of and for the year ended December 31, 2018				
	Balance Outstanding	Average Balance Outstanding[(1)]	Highest Balances at Any Month-end	Weighted Average Interest Rate[(2)]	Year-end Interest Rate
	(in billions of Won, except for percentages)				
Borrowings from:					
Bank of Korea[(3)]	₩ 2,289	₩ 2,566	₩ 2,814	0.66%	0.50 - 0.75%
Call money	960	1,583	5,052	2.51	0.00 - 6.85
Other short-term borrowings[(4)]	12,043	9,263	12,262	1.79	0.00 - 9.20
	₩15,292	₩13,412	₩20,128	1.66%	

Notes:

(1) Average balances are based on (a) daily balances of the Bank and (b) quarterly balances for the Bank's affiliates.

(2) Weighted-average interest rates are calculated by dividing the total interest expenses by the average amount borrowed.

(3) Borrowings from the Bank of Korea generally mature within one month for borrowings in Won and six months for borrowings in foreign currencies.

(4) Other short-term borrowings included borrowings from trust accounts, bills sold, and borrowings in domestic and foreign currencies.

	As of and for the year ended December 31, 2019				
	Balance Outstanding	Average Balance Outstanding[(1)]	Highest Balances at Any Month-end	Weighted Average Interest Rate[(2)]	Year-end Interest Rate
	(in billions of Won, except for percentages)				
Borrowings from:					
Bank of Korea[(3)]	₩ 2,387	₩ 2,269	₩ 2,435	0.62%	0.50 - 0.75%
Call money	538	1,044	1,189	2.37	0.00 - 5.25
Other short-term borrowings[(4)]	10,852	11,580	12,084	1.89	0.00 - 7.50
	₩13,777	₩14,893	₩15,708	1.73%	

Notes:

(1) Average balances are based on (a) daily balances of the Bank and (b) quarterly balances for the Bank's affiliates.

(2) Weighted-average interest rates are calculated by dividing the total interest expenses by the average amount borrowed.

(3) Borrowings from the Bank of Korea generally mature within one month for borrowings in Won and six months for borrowings in foreign currencies.

(4) Other short-term borrowings included borrowings from trust accounts, bills sold, and borrowings in domestic and foreign currencies.

The Bank's short-term borrowings have maturities of less than one year and are generally unsecured with the exception of borrowings from the Bank of Korea, which are generally secured with securities at fair value through other comprehensive income or at amortized cost (previously classified as available-for sale or held-to-maturity securities under K-IFRS 1039) held by the Bank.

RISK MANAGEMENT

Overview

The Bank has a comprehensive system of risk management in order to manage the risks of the Bank within acceptable limits and ensure the soundness of its assets. The Bank strives to stabilize its long-term profitability through effective risk management.

The Board of Directors ("**Board**") sets basic guidelines with respect to the Bank's risk management and controls, such as total risk limits for the Bank. Under the supervision of the Board, the Risk Management Committee determines capital allocation and risk limits for each business group, and assists the management in formulating basic management guidelines for all banking operations.

In accordance with these basic policies and guidelines, the Risk Policy Committee and the Asset & Liability Management Committee ("**ALM Committee**"), both consisting of senior executives and group heads, oversee credit, market and operational risks. The Risk Management Group, which is independent from all business units, identifies, evaluates and controls all risks of the Bank and supports the Risk Management Committee.

Credit Risk Management

Credit risk, which is the risk of loss from default by borrowers, other obligors or other counterparties to the transactions that the Bank has entered into, is the greatest risk the Bank faces. The Bank's credit risk management encompasses all areas of credit that may result in potential economic loss, including not just transactions that are recorded on its balance sheets, but also off-balance-sheet transactions such as guarantees, loan commitments and derivatives transactions. The Bank's credit risk management is guided by the following principles:

- achieve a profit level corresponding to the level of risks involved;
- improve asset quality and achieve an optimal mix of asset portfolios;
- avoid excessive loan concentration in a particular borrower or sector;
- closely monitor the borrower's ability to repay the debt; and
- provide financial support to advance the growth of select customers.

Major policies for the Bank's credit risk management, including the Bank's overall credit risk management plan and credit policy guidelines, are determined by the Bank's Risk Policy Committee, the executive decision-making body for management of credit risk. The Risk Policy Committee is headed by the Chief Risk Officer, and also comprises of the Chief Credit Officer and the heads of each business unit. In order to separate the loan approval functions from credit policy decision-making, the Bank has a Credit Review Committee that performs credit review evaluations with a focus on improving the asset quality of and profitability from the loans being made, and operates separately from the Risk Policy Committee. Both the Risk Policy Committee and the Credit Review Committee make decisions by a vote of two-thirds or more of the attending members of the respective committees, which must constitute at least two-thirds of the respective committee members to satisfy the respective quorum.

The Bank complies with credit risk management procedures pursuant to internal guidelines and regulations and continually monitors and improves these guidelines and regulations. Its credit risk management procedures include:

- credit evaluation and approval;
- credit review and monitoring; and
- credit risk assessment and control.

Credit Evaluation and Approval

All loan applicants and guarantors are subject to credit evaluation before approval of any loans. Credit evaluation of loan applicants are carried out by senior officers of the Bank specifically charged with granting loan approvals. Loan evaluation is carried out by a group rather than by an individual reviewer through an objective and deliberative process. Credit ratings of loan applicants and guarantors influence loan interest rates, the level of internal approval required, credit exposure limits, calculation of potential losses and estimated cost of capital, and therefore are determined objectively and independently by the relevant business unit. The Bank uses a credit scoring system for retail loans and a credit-risk rating system for corporate loans.

Each of the Bank's borrowers is assigned a credit rating, which is based on a comprehensive internal credit evaluation system that considers a variety of criteria. For retail borrowers, the credit rating takes into account the borrower's biographic details, past dealings with the Bank and external credit rating information, among other things. For corporate borrowers, the credit rating takes into account financial indicators as well as non-financial indicators such as industry risk, operational risk and management risk, among other things. The credit rating, once assigned, serves as the fundamental instrument for the Bank's credit risk management, and is applied to a wide range of credit risk management processes, including credit approval, credit limit management, loan pricing and computation of allowance for loan losses. The Bank has separate credit evaluation systems for retail customers, SOHO customers and corporate customers, which are further segmented and refined to meet Basel II requirements, which requirements have not changed under Basel III. See "*Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies — Impairment of Financial Assets*."

Retail Loans

Loan applications for retail loans are reviewed in accordance with the Bank's credit scoring system and the objective statistics models for secured and unsecured loans maintained and operated by the Bank's Retail Banking Division. The Bank's credit scoring system is an automated credit approval system used to evaluate loan applications and determine the appropriate pricing for the loan, and takes into account factors such as a borrower's personal information, transaction history with the Bank and other financial institutions and other relevant credit information. The applicant is assigned a score, which is used to determine (i) whether to approve the applicant's loan, (ii) the amount of loan to be granted, and (iii) the interest rates thereon. The applicant's score also determines whether the applicant is approved for credit, conditionally approved, subject to further assessment, or denied. If the applicant becomes subject to further assessment, the appropriate discretionary body, either at the branch level or at the headquarter level, makes a reassessment based on qualitative as well as quantitative factors, such as credit history, occupation and past relationship with the Bank.

For mortgage and home equity loans and loans secured by real estate, the Bank evaluates the value of the real estate offered as collateral using a proprietary database, which contains information about real estate values throughout Korea. In addition, the Bank uses up-to-date information provided by third parties regarding the real estate market and property values in Korea. While the Bank uses internal staff from the processing centers to appraise the value of the real estate collateral, it also hires certified appraisers to review and co-sign the appraisal value of real estate collateral that have an appraisal value exceeding ₩3 billion, as initially determined by the processing centers. The Bank also reevaluates internally, on a summary basis, the appraisal value of collateral at least every year.

For loans secured by securities, deposits or other assets other than real estate, the Bank requires borrowers to observe specified collateral ratios in respect of secured obligations.

Corporate Loans

The Bank rates all of its corporate borrowers using internally developed credit evaluation systems. These systems consider a variety of criteria (quantitative, qualitative, financial and non-financial) in order to standardize credit decisions and focus on the quality of borrowers rather than the size of loans. The quantitative considerations include the borrower's financial and other data, while the qualitative considerations are based on the judgment of the Bank's credit officers as to the borrower's ability to repay. Financial considerations include financial variables and ratios based on customer's financial statements, such as return on assets and cash flow to total debt ratios, and non-financial considerations include, among other things, the industry to which the borrower's businesses belong, the borrower's competitive position in its industry, its operating and funding capabilities, the quality of its management and controlling stockholders (based in part on interviews with its officers and employees), technological capabilities and labor relations.

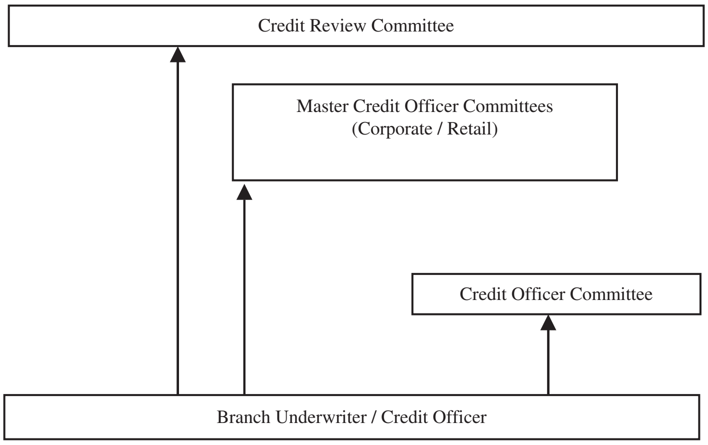
In addition, in order to enhance the accuracy of its internal credit reviews, the Bank also considers reports prepared by external credit rating services, such as Nice Information Service and Korea Enterprise Data, and monitors and improves the effectiveness of the credit risk-rating systems using a database that it updates continually with actual default records.

Based on the scores calculated under the credit rating system, which takes into account the evaluation criteria described above and the probability of default, the Bank assigns the borrower one of 23 grades (from the highest of AAA to the lowest of D3). Grades AA through B are further broken down into "+", "0" or "-." Grades AAA through B- are classified as normal, grade CCC precautionary, and grades CC through D3 non-performing. The credit risk-rating model is further differentiated by the size of the corporate borrower and the type of credit facilities.

Loan Approval Process

Loans are generally approved after evaluations and approvals by the relationship manager at the branch level as well as the committee of the applicable business unit at the Bank. The approval limit for retail loans is made based on the Bank's automated credit scoring system. In the case of large corporate loans, approval limits are also reviewed and approved by a Credit Officer at the headquarter level. Depending on the size and the importance of the loan, the approval process is further reviewed by the Credit Officer Committee or the Master Credit Officer Committee. If the loan is considered significant or the amount exceeds the discretion limit of the Master Credit Officer Committee, further evaluation is made by the Credit Review Committee, which is the Bank's highest decision-making body in relation to credit approval. The Credit Review Committee's evaluation and approval of loan limits vary depending on the credit ratings of the borrowers as determined by the Bank's internal credit rating system. For example, for borrowers with a credit rating of B-, the Credit Review Committee evaluates and approves unsecured loans in excess of ₩10 billion and secured loans in excess of ₩15 billion, whereas for borrowers with a credit rating of AAA, the Credit Review Committee evaluates and approves unsecured loans in excess of ₩40 billion and secured loans in excess of ₩90 billion. The Credit Review Committee holds at least two meetings a week to approve applications for large-sized loans whose principal amounts exceed prescribed levels set by it.

The chart below summarizes the Bank's credit approval process. The Master Credit Officer and the Head of Business Division do not make individual decisions on loan approval, but are part of the decision-making process at the group level.



The reviewer at each level of the review process may in its discretion approve loans up to a maximum amount per loan assigned to such level. The discretionary loan approval limit for each level of the loan approval process takes into account the total amount of loans extended to the borrower, the credit level of the applicant based on credit review, the existence and value of collateral and the level of credit risk established by the credit rating system. The discretionary loan amount approval limit ranges from ₩15 million for unsecured retail loans with a credit rating of B-, which are subject to approvals by the retail branch manager, to ₩90 billion for secured loans with a credit rating of AAA, which are subject to approvals by the Master Credit Officer Committee. Any loans exceeding the maximum discretionary loan amount approval limit must be approved by the Credit Review Committee.

Credit Review and Monitoring

The Bank continually reviews and monitors credit risks primarily with respect to borrowers. In particular, the Bank's automated early warning system conducts daily examination for borrowers using over 206 financial and non-financial factors, and the branch manager and the credit officer must conduct periodic loan review and report to an independent Credit Review Department which analyzes in detail the results and adjusts credit ratings accordingly. Based on these reviews, the Bank adjusts a borrower's credit rating, credit limit and credit policies. In addition, the group credit rating of the borrower's group, if applicable, may be adjusted following a periodic review of the main debtor groups as identified by the Governor of the FSS based on their outstanding credit exposures. The Bank also continually reviews other factors, such as industry-specific conditions for the borrower's business and its domestic and overseas asset base and operations, in order to ensure that the assigned ratings are appropriate. The Credit Review Department provides credit review reports, independent of underwriting, to the Chief Risk Officer on a monthly basis.

The early warning system performs automatic daily checks for borrowers to whom the Bank has more than ₩1 billion of total exposure (which represents the total outstanding amount due from a borrower, net of collateral for deposit, installment savings, guarantees and import guarantee money) or ₩500 million of exception for credit exposure (which represents total exposure net of effective collateral). When the early warning systems detects a warning signal, such signal and other findings from the monitoring are reviewed by the Credit Review Department in the case of a borrower to whom the Bank has more than ₩2 billion of exposure, and by the branch manager and the Credit Officer in the case of a borrower to whom the Bank has ₩2 billion or less of exposure. In addition, the Bank carries out a timeless credit review of each borrower in accordance with changes in credit risk factors based on changes in the economic environment. The results of such credit review are continually reported to the Chief Risk Officer of the Bank.

Depending on the nature of the signals detected by the early warning system, a borrower may be classified as "worsening credit" and become subject to evaluation for a possible downgrade in credit rating, or may be initially classified as "showing early warning signs" or become reinstated to the "normal borrower" status. For borrowers classified as "showing early warning signs," the relevant branch manager gathers information and conducts a review of the borrower to determine whether the borrower should be classified as a worsening credit or whether to impose management improvement warnings or implement joint creditors' management. If the borrower becomes non-performing, the Bank's collection department directly manages such borrower's account in order to maximize recovery rate, and conducts auctions, court proceedings, sale of assets or corporate restructuring as needed.

Pursuant to the foregoing credit review and monitoring procedures and in order to promptly prevent deterioration of loan qualities, the Bank classifies potentially problematic borrowers into (i) borrowers that show early warning signals, (ii) borrowers that require precaution, (iii) borrowers that require observation and (iv) normal borrowers, and treats them differentially accordingly.

In order to curtail delinquency among its corporate customers, the Bank takes primarily the following measures: (i) systematic monitoring of borrowers with sizable outstanding loans, (ii) heightened monitoring of borrowers with bad credit history and/or belonging to troubled industries, and (iii) assignment of industry-specific lending caps, as adjusted for whether specific industries are particularly sensitive to general business cycles and/or are troubled at a given time.

Systematic monitoring of borrowers with sizable outstanding loans. The Bank currently applies a heightened monitoring system to corporate borrowers with outstanding loans (other than guaranteed loans and loans secured by specified types of collaterals such as deposits with the Bank or letters of credit) in the aggregate amount of ₩1 billion or more and borrowers with net outstanding loans (i.e., the outstanding loan amount minus the fair value of collaterals (other than as aforesaid) securing such loans) in the aggregate amount of ₩500 million or more. Under this monitoring system, each such borrower is assigned one of the following ratings:

- "Normal borrower" — a borrower who is determined to have a low probability of insolvency with a credit rating above CCC (sub-borrower rating applicable);

- "Borrower that requires observation" — a borrower that carries some risk of affecting the corporate insolvency in the future and is subject to consistent observation to detect any change of such risk;

- "Borrower that requires precaution" — a borrower with a possibility of insolvency due to an increase in risk of default and therefore requires detailed inspection of the credit quality of such borrower and precaution in extending any further loans;

- "Borrower with early warning signs" — a borrower with a high possibility of insolvency; and

- "Problematic or reorganized borrower" — a borrower currently undergoing rehabilitation procedures, such as management improvement plans, workout or corporate recovery or showing no signs of recovery.

The Bank conducts systematic monitoring of the foregoing borrowers at intervals depending on the borrower's credit rating (for example, every 12 months for "normal" borrowers with a credit rating of AAA to A, every nine months for "normal" borrowers with a credit rating of A- to BBB+, every six months for a credit rating of BBB to B- and every three months for borrowers with a credit rating of CCC or below and borrowers not deemed to be "normal"). In addition, the loan reviewer may request more frequent monitoring if the borrower is showing signs of deteriorating credit quality. For borrowers with outstanding loan amounts of ₩2 billion or more, the Bank also monitors the revenues and earnings of such borrower on a quarterly basis within 10 weeks following the end of each quarter.

Heightened monitoring of borrowers with bad credit history and/or belonging to troubled industries. In addition to the systematic monitoring discussed above, the Bank also carries out additional monitoring for borrowers that, among others, (i) are rated as "requiring observation," "requiring precaution" or "with early warning signs" as noted above, (ii) have prior history of delinquency or restructuring or (iii) have borrowings that are classified as substandard or below. Based on the heightened monitoring of these borrowers, the Bank adjusts contingency planning as to how the overall asset quality of a specific industry should change for each phase of the business cycle, how the Bank should limit or reduce its exposure to such borrowers, and how the Bank's group-wide delinquency and non-performing ratio would change, among others.

Credit Risk Assessment and Control

In order to assess credit risk in a systematic manner, the Bank has developed and upgraded systems designed to quantify credit risk based on selection and monitoring of various statistics, including delinquency rate, non-performing loan ratio, expected loan loss and weighted average risk rating.

The Bank controls loan concentration by monitoring and managing loans at two levels: portfolio level and individual loan account level. In order to maintain portfolio-level credit risk at an appropriate level, the Bank manages its loans using value-at-risk ("**VaR**") limits for the entire bank as well as for each of its business units. In order to prevent concentration of risk in a particular borrower or borrower class, the Bank also manages credit risk by borrower, industry, country and other detailed categories.

The Bank measures credit risk using internally accumulated data. The Bank measures expected and unexpected losses with respect to total assets monthly, which the Bank refers to when setting risk limits for, and allocating capital to, its business groups. Expected loss is calculated based on the probability of default, the loss given default, the exposure at default and the past bankruptcy rate and recovery rate, and the Bank provides allowance for loan losses accordingly. The Bank makes provisioning at a level which is the higher of the FSS requirement or the Bank's internal calculation. Unexpected loss is predicted based on VaR, which is used to determine compliance with the aggregate credit risk limit for the Bank as well as the credit risk limit for the relevant department within the Bank. The Bank uses the AIRB method as proposed by the Basel Committee to compute VaR at the account-specific level as well as to measure risk adjusted performance.

Market Risk Management

Market risk is the risk of loss generated by fluctuations in market prices such as interest rates, foreign exchange rates and equity prices. The principal market risks to which the Bank is exposed are interest rate risk and, to a lesser extent, foreign exchange and equity price risk. These risks stem from the Bank's trading and non-trading activities relating to financial instruments such as loans, deposits, securities and financial derivatives. The Bank divides market risk into risks arising from trading activities and risks arising from non-trading activities.

The Bank's Risk Management Committee establishes overall market risk management principles for both the trading and non-trading activities of the Bank. Based on these principles, the Bank's Risk Policy Committee acts as the executive decision-making body in relation to market risks in terms of setting its risk management policies and risk limits in relation to market risks and assets and controlling market risks arising from trading and non-trading activities of the Bank. The Risk Policy Committee consists of deputy presidents in charge of the Bank's seven business groups, the Chief Risk Officer and the Chief Financial Officer. At least on a monthly basis, the Risk Policy Committee reviews and approves reports relating to, among others, the position and VaR with respect to the Bank's trading activities and the position, VaR, duration gap and market value analysis and net interest income simulation with respect to its non-trading activities. In addition, the Bank's Risk Engineering Department comprehensively manages market risks on an independent basis from the Bank's operating departments, and functions as the middle office of the Bank. The Bank measures market risk with respect to all assets and liabilities in the bank accounts and trust accounts in accordance with the regulations promulgated by the FSC.

Market Risk Exposure from Trading Activities

The Bank's trading activities principally consist of:

- trading activities to realize short-term profits from trading in the equity and debt securities markets and the foreign currency exchange markets based on the Bank's short-term forecast of changes in market situation and customer demand, for its own account as well as for the trust accounts of its customers; and

- trading activities primarily to realize profits from arbitrage transactions involving derivatives such as swaps, forwards, futures and options, and, to a lesser extent, to sell derivative products to its customers and to cover market risk associated with those trading activities.

As a result of these trading activities, the Bank is exposed principally to interest rate risk, foreign currency exchange rate risk and equity risk.

Interest Rate Risk

The Bank's exposure to interest rate risk arises primarily from Won-denominated debt securities, directly held or indirectly held through beneficiary certificates, and, to a lesser extent, from interest rate derivatives. The Bank's exposure to interest rate risk arising from foreign currency-denominated trading debt securities is minimal since its net position in those securities is not significant. As the Bank's trading accounts are marked-to-market daily, it manages the interest rate risk related to its trading accounts using VaR, a market value-based tool.

Foreign Currency Exchange Rate Risk

The Bank's exposure to foreign currency exchange rate risk mainly relates to its assets and liabilities, including derivatives such as foreign currency forwards and futures and currency swaps, which are denominated in currencies other than the Won. The Bank manages foreign currency exchange rate risk, including the corresponding risks faced by its overseas branches, on a consolidated basis by covering all of its foreign exchange spot and forward positions in both trading and non-trading accounts.

The Bank's net foreign currency open position represents the difference between its foreign currency assets and liabilities as offset against forward foreign currency positions, and is the Bank's principal exposure to foreign currency exchange rate risk. The Risk Policy Committee oversees the Bank's foreign currency exposure for both trading and non-trading activities by establishing limits for the net foreign currency open position, loss limits and VaR limits. The Bank centrally monitors and manages its foreign exchange positions through its Financial Engineering Center. Dealers in the Financial Engineering Center manage the Bank's consolidated position within preset limits through spot trading, forward contracts, currency options, futures and swaps and foreign currency swaps. The Bank sets a limit for net open positions by currency. The limits for currencies other than the U.S. dollar, Yen, Euro and Chinese Yuan are set in a conservative manner in order to minimize trading in such currencies.

The following table shows the Bank's net foreign currency open positions as of December 31, 2017, 2018 and 2019. Positive amounts represent long exposures and negative amounts represent short exposures.

	As of December 31,		
Currency	**2017**	**2018**	**2019**
	(in millions of U.S. dollars)		
U.S. dollar	US$ 47.3	US$ 38.9	US$ (147.4)
Yen	(3.9)	(9.6)	(14.1)
Euro	3.4	0.9	12.1
Others	1,113.9	1,104.1	1,169.2
Total	US$1,160.8	US$1,134.3	US$1,019.9

Equity Risk

The Bank's equity risk related to trading activities mainly involves trading equity portfolios of Korean companies and Korea Stock Price Index futures and options. The trading equity portfolio consists of stocks listed on the KRX KOSPI Market or the KRX KOSDAQ Market of the Korea Exchange and nearest-month or second nearest-month futures contracts under strict limits on diversification as well as limits on positions. The Bank maintains strict scrutiny of these activities in light of the volatility in the Korean stock market and closely monitors the loss limits and the observance thereof. Although the Bank holds a substantially smaller amount of equity securities than debt securities in its trading accounts, the VaR of trading account equity risk is generally higher than that of trading account interest rate risk due to high volatility in the value of equity securities. As of December 31, 2017, 2018 and 2019, the Bank held ₩219.0 billion, ₩184.2 billion and ₩126.3 billion, respectively, of equity securities in its trading accounts (including the trust accounts).

Management of Market Risk from Trading Activities

The following tables present an overview of market risk, measured by VaR, from trading activities of the Bank as of and for the year ended December 31, 2019. For market risk management purposes, the Bank includes in the computation of total VaR its trading portfolio in bank accounts and assets in trust accounts, in each case, for which it guarantees principal or fixed return in accordance with the FSC regulations.

	Trading Portfolio VaR for the Year 2019[1]			
	Average	Minimum	Maximum	As of December 31, 2019
	(in billions of Won)			
Interest rate	21.2	12.7	32.4	28.3
Foreign exchange[2]	24.7	22.3	29.2	25.9
Equities	18.1	8.2	49.4	15.4
Option volatility[3]	0.2	0.1	0.3	0.2
Less: portfolio diversification[4]	(16.3)	(11.7)	(29.8)	(21.8)
Total VaR[5]	47.9	31.5	81.6	48.0

Notes:

(1) 10-day VaR results is based on a 99.9% confidence level.

(2) Includes both trading and non-trading accounts as the Bank manages foreign exchange risk on a total position basis.

(3) Volatility implied from the option price using the Black-Scholes or a similar model.

(4) Calculation of portfolio diversification effects is conducted on different days' scenarios for different risk components. Total VaRs are less than the simple sum of the risk component VaRs due to offsets resulting from portfolio diversification.

(5) Includes trading portfolios in the Bank's bank accounts and assets in trust accounts, in each case, for which it guarantees principal or fixed return.

The Bank generally manages its market risk from the trading activities of its portfolios on an aggregated basis. To control its trading portfolio market risk, the Bank uses position limits, VaR limits, stop loss limits, Greek limits and stressed loss limits. In addition, it establishes separate limits for investment securities. The Bank maintains risk control and management guidelines for derivative trading based on the regulations and guidelines promulgated by the FSC, and measures market risk from trading activities to monitor and control the risk of its operating divisions and teams that perform trading activities. The Bank manages VaR measurements and limits on a daily basis based on automatic interfacing of its trading positions into its market risk measurement system. In addition, the Bank presets limits on loss, sensitivity, investment and stress for its trading departments and desks and monitors such limits and observance thereof on a daily basis.

Value-at-risk analysis. The Bank uses 10-day and one-day VaRs to measure its market risk. The Bank calculates (i) 10-day VaRs on a daily basis based on data for the previous 12 months for the holding periods of 10 days and (ii) one-day VaRs on a daily basis based on data for the previous 12 months for the holding periods of one day. A 10-day VaR and one-day VaR are statistically estimated maximum amounts of loss that can occur for 10 days and one day, respectively, under normal market conditions. If a VaR is measured using a 99% confidence level, the actual amount of loss may exceed the expected VaR, on average, once out of every 100 business days, while if a VaR is measured using a 99.9% confidence level, the actual amount of loss may exceed the expected VaR, on average, once out of 1,000 business days.

The Bank currently uses the 10-day 99% confidence level-based VaR and stressed VaR for purposes of calculating the regulatory capital used in reporting to the FSS. Stressed VaR reflects the potential significant loss in the current trading portfolio based on scenarios derived from a crisis simulation during the preceding 12 months. The Bank also uses the more conservative 10-day 99.9% confidence level-based VaR for purposes of calculating its "economic" capital used for internal management purposes, which is a concept used in determining the amount of the Bank's requisite capital in light of the market risk. In addition, the Bank uses the one-day 99% confidence level-based VaR on a supplemental basis for purposes of setting and managing risk limits specific to each desk or team in its operating units as well as for back-testing purposes. For the Bank, the amount of losses (either actual or virtual) exceeded the one-day 99% confidence level-based VaR amount three times in 2017, zero times in 2018 and five times in 2019. The increased frequency of instances in which the amount of losses exceeded the VaR amount in 2019 was primarily because the foreign currency exchange market experienced unusually high volatility. The VaR exceptions referred to above were all due to the amount of virtual losses exceeding the VaR amount. Virtual losses represent the potential changes in the value of a portfolio when simulating the same portfolio with market variables of the next trading day.

Value-at-risk is a commonly used market risk management technique. However, VaR models have the following shortcomings:

- VaR estimates possible losses over a certain period at a particular confidence level using past market movement data. Past market movement, however, is not necessarily a reliable indicator of future events, particularly those that are extreme in nature;

- VaR may underestimate the probability of extreme market movements;

- The Bank's VaR models assume that a holding period of generally one to 10 days is sufficient prior to liquidating the underlying positions, but such assumption regarding the length of the holding period may actually prove to be inadequate;

- The 99.9% confidence level does not take into account or provide indication of any losses that might occur beyond this confidence level; and

- VaR does not capture all complex effects of various risk factors on the value of positions and portfolios and could underestimate potential losses.

Currently, the Bank conducts back-testing of VaR results against actual outcomes on a daily basis.

The Bank operates an integrated market risk management system which manages the Bank's Won-denominated and foreign-denominated accounts. This system uses historical simulation to measure both linear risks arising from products such as equity and debt securities and nonlinear risks arising from other products including options. The Bank believes that this system enables it to generate elaborate and consistent VaR information and to perform sensitivity analysis and back testing in order to check the validity of the models on a daily basis.

Stress test. In addition to VaR, the Bank performs stress tests to measure market risk. As VaR assumes normal market situations, the Bank assesses its market risk exposure to unlikely abnormal market fluctuations through the stress test. Stress test is a valuable supplement to VaR since VaR does not cover potential loss if the market moves in a manner which is outside the Bank's normal expectations. Stress test projects the anticipated change in value of holding positions under certain scenarios assuming that no action is taken during a stress event to change the risk profile of a portfolio.

The Bank uses seven relatively simple but fundamental scenarios for stress test by taking into account four market risk components: foreign currency exchange rates, stock prices, and Won-denominated interest rates and foreign currency-denominated interest rates. For the worst case scenario, the Bank assumes instantaneous and simultaneous movements in four market risk components: appreciation of the Won by 20%, a decrease in Korea Exchange Composite Index by 30% and increases in Won-denominated and U.S. dollar-denominated interest rates by 200 basis points each, respectively. Under this worst-case scenario, the market value of the Bank's trading portfolio would have declined by ₩456 billion as of December 31, 2019. The Bank performs stress test on a daily basis and reports the results to its Risk Policy Committee on a monthly basis and its Risk Management Committee on a quarterly basis.

The Bank sets limits on stress testing for its overall operations. If the potential impact of market turmoil or other abnormalities is large, the Bank's head of Risk Management will notify such impact and may request a portfolio restructuring or other proper action.

Hedging and Derivative Market Risk

The principal objective of the Bank's group-wide hedging strategy is to manage its market risk within established limits. The Bank uses derivative instruments to hedge its market risk as well as to make profits by trading derivative products within preset risk limits. The Bank's derivative trading includes interest rate and cross-currency swaps, foreign currency forwards and futures, stock index and interest rate futures, and stock index and currency options.

While the Bank uses derivatives for hedging purposes, derivative transactions by nature involve market risk since the Bank takes trading positions for the purpose of making profits. These activities consist primarily of the following:

- arbitrage transactions to make profits from short-term discrepancies between the spot and derivative markets or within the derivative markets;

- sales of tailor-made derivative products that meet various needs of the Bank's corporate customers, and related transactions to reduce its exposure resulting from those sales;

- taking positions in limited cases when the Bank expects short-swing profits based on its market forecasts; and

- trading to hedge the Bank's interest rate and foreign currency risk exposure as described above.

In accordance with accounting requirements under K-IFRS 1109 'Financial Instruments', which has replaced K-IFRS 1039 'Financial Instruments: Recognition and Measurement' since January 1, 2018, the Bank has implemented internal processes which include a number of key controls designed to ensure that fair value is measured appropriately, particularly where a fair value model is internally developed and used to price a significant product.

The Bank assesses the adequacy of the fair market value of a new product derived from its internal model prior to the launch of such product. The assessment process involves the following:

- computation of an internal dealing system market value (based on assessment by the quantitative analysis team of the adequacy of the formula and the model used to compute the market value as derived from the dealing system);

- computation of the market value as obtained from an outside credit evaluation company; and

- following comparison of the market value derived from an internal dealing system to that obtained from outside credit evaluation companies, determination as to whether to use the internally developed market value based on inter-departmental consensus.

The dealing system market value, which is used officially by the Bank after undergoing the assessment process above, does not undergo a sampling process that confirms the value based on review of individual transactions, but is subject to an additional assessment procedure of comparing such value against the profits derived from the dealing systems based on the deal portfolio sensitivity. See "*Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies*" and Note 3 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2017 and 2018 and Note 2 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2018 and 2019 included elsewhere in this offering circular.

Market Risk Management for Non-trading Activities

Interest Rate Risk

Interest rate risk represents the Bank's principal market risk from non-trading activities. Interest rate risk is the risk of loss resulting from interest rate fluctuations that adversely affect the financial condition and results of operations of the Bank. The Bank's interest rate risk primarily relates to the differences between the timing of rate changes for interest-earning assets and that for interest-bearing liabilities.

Interest rate risk affects the Bank's earnings and the economic value of the Bank's net assets as follows:

- *Earnings.* Interest rate fluctuations have an effect on the Bank's net interest income by affecting its interest-sensitive operating income and expenses.

- *Economic value of net assets.* Interest rate fluctuations influence the Bank's net worth by affecting the present value of cash flows from the assets, liabilities and other transactions of the Bank.

Accordingly, the Bank measures and manages interest rate risk for non-trading activities by taking into account the effects of interest rate changes on both its income and net asset value. The Bank measures and manages interest rate risk on a daily and monthly basis with respect to all interest-earning assets and interest-bearing liabilities in the Bank's bank accounts (including derivatives denominated in Won which are principally interest rate swaps entered into for the purpose of hedging) and in the trust accounts, except that the Bank measures VaRs on a monthly basis. Most of the Bank's interest-earning assets and interest-bearing liabilities are denominated in Won.

Interest Rate Risk Management

The principal objectives of the Bank's interest rate risk management are to generate stable net interest income and to protect the Bank's net asset value against interest rate fluctuations. Through its asset and liability management system, the Bank monitors and manages its interest rate risk based on various analytical measures such as interest rate gap, duration gap and net present value and net interest income simulations, and monitors on a monthly basis its interest rate VaR limits, interest rate earnings at risk ("**EaR**") limits and interest rate gap ratio limits. The Bank measures its interest rate VaR and interest rate EaR based on interest rate risk in the banking book standardized approach presented by the Bank for International Settlements (the "**IRRBB standardized approach**"). IRRBB, which is part of the Basel capital framework's Pillar 2 and subject to the Committee's guidance set out in the 2004 revised principles for the management and supervision of interest rate risk, refers to current or prospective risk to a bank's capital and earnings arising from adverse movements in interest rates that affect the bank's banking book position. Interest rate risk is managed by reflecting possible future interest rate environments and customer behavior based on the IRRBB standardized approach. Interest rate VaR is measured by the change in economic value of equity under six types of scenarios (parallel up, parallel down, stiffener, flattener, short-term interest rate-up and short-term interest rate-down). Interest rate EaR is measured by the largest loss amount based on two types of scenarios (parallel up and parallel down). The Risk Policy Committee sets the interest rate risk limits for the Bank's Won-denominated and foreign currency-denominated non-trading accounts and trust accounts, and the Risk Management Committee sets the Bank's overall interest rate risk limit, in both cases, at least annually. The Risk Management Department monitors the Bank's compliance with these limits and reports the monitoring results to the Risk Policy Committee on a monthly basis and the Risk Management Committee on a quarterly basis. The Bank uses interest rate swaps to control its interest rate exposure limits.

Interest rate VaR represents the maximum anticipated loss in a net present value calculation (computed as the present value of interest-earning assets minus the present value of interest-bearing liabilities), whereas interest rate EaR represents the maximum anticipated loss in a net earnings calculation (computed as interest income minus interest expenses) for the immediately following one-year period, in each case, as a result of negative movements in interest rates. Therefore, interest rate VaR is a more expansive concept than interest rate EaR in that the former covers all interest-earning assets and all interest-bearing liabilities, whereas the latter covers only those interest-earning assets and interest-bearing liabilities that are exposed to interest rate volatility for a one-year period.

Hence, for interest rate VaRs, the duration gap (namely, the weighted average duration of all interest-earning assets minus the weighted average duration of all interest-bearing liabilities) can be a more critical factor than the relative sizes of the relevant assets and liabilities in influencing interest rate VaRs. In comparison, for interest rate EaRs, the relative sizes of the relevant assets and liabilities in the form of the "one year or less interest rate" gap (namely, the volume of interest-earning assets with maturities of less than one year minus the volume of interest-bearing liabilities with maturities of less than one year) is the most critical factor in influencing the interest rate EaRs.

On a monthly basis, the Bank monitors whether the non-trading positions for interest rate VaR and EaR exceed their respective limits as described above.

Interest rate VaR cannot be meaningfully compared to the 10-day 99% confidence level based VaR ("**market risk VaR**") for managing trading risk principally because (i) the underlying assets are different (namely, non-trading interest-earning assets as well as liabilities in the case of the interest rate VaR, compared to trading assets only in the case of the market risk VaR), and (ii) interest rate VaR is sensitive to interest rate movements only while the market risk VaR is sensitive to interest rate movements as well as other factors such as foreign currency exchange rates, stock market prices and option volatility.

Even if comparison were to be made between the interest rate VaR and the interest rate portion only of the market risk VaR, the Bank does not believe such comparison would be meaningful since the interest rate VaR examines the impact of interest rate movements on both assets and liabilities (which will likely have offsetting effects), whereas the interest rate portion of the market VaR examines the impact of interest rate movements on assets only.

The Bank uses various analytical methodologies to measure and manage its interest rate risk for non-trading activities on a daily and monthly basis, including the following analyses:

- Interest rate gap analysis;

- Duration gap analysis;

- Market value analysis; and

- Net interest income simulation analysis.

Interest Rate Gap Analysis

The Bank performs an interest gap analysis to measure the difference between the amount of interest-earning assets and that of interest-bearing liabilities at each maturity and re-pricing date for specific time intervals by preparing interest rate gap tables in which the Bank's interest-earning assets and interest-bearing liabilities are allocated to the applicable time intervals based on the expected cash flows and re-pricing dates. On a daily basis, the Bank performs interest rate gap analysis for Won- and foreign currency-denominated assets and liabilities in its bank and trust accounts. The Bank's gap analysis includes Won-denominated derivatives (which are interest rate swaps for the purpose of hedging) and foreign currency-denominated derivatives (which are currency swaps for the purpose of hedging), which are managed centrally at the Financial Engineering Center. Through the interest rate gap analysis that measures interest rate sensitivity gaps, cumulative gaps and gap ratios, the Bank assesses its exposure to future interest risk fluctuations.

For interest rate gap analysis, the Bank assumes and uses the following maturities for different types of assets and liabilities:

- With respect to the maturities and re-pricing dates of the Bank's assets, the Bank assumes that the maturity of its prime rate-linked loans is the same as that of its fixed-rate loans. The Bank excludes equity securities from interest-earning assets.

- With respect to the maturities and re-pricing of the Bank's liabilities, the Bank assumes that money market deposit accounts and "non-core" demand deposits under the FSC guidelines have a maturity of one month or less for both Won-denominated accounts and foreign currency-denominated accounts.

- With respect to "core" demand deposits under the FSC guidelines, the Bank assumes that they have maturities of eight different intervals ranging from one month to five years.

The following tables show the Bank's interest rate gaps as of December 31, 2019 for (i) Won-denominated non-trading bank accounts, including derivatives entered into for the purpose of hedging and (ii) foreign currency-denominated non-trading bank accounts, including derivatives entered into for the purpose of hedging.

	As of December 31, 2019						
	0-3 Months	3-6 Months	6-12 Months	1-2 Years	2-3 Years	Over 3 Years	Total
	(in billions of Won, except percentages)						
Interest-earning assets	116,560	65,908	31,876	25,495	21,555	26,393	287,787
Fixed rates	17,538	21,954	20,154	18,374	16,896	15,804	110,720
Floating rates	97,781	43,184	10,492	7,091	4,659	10,269	3,590
Interest rate swaps	1,240	770	1,230	30	0	320	3,590
Interest-bearing liabilities	115,835	46,948	71,826	22,563	19,071	25,648	301,891
Fixed liabilities	53,716	34,065	58,507	11,605	8,029	2,914	168,836
Floating liabilities	58,529	12,883	13,320	10,957	11,043	22,734	129,466
Interest rate swaps	3,590	0	0	0	0	0	3,590
Sensitivity gap	724	18,960	(39,950)	2,932	2,484	745	(14,104)
Cumulative gap	724	19,684	(20,266)	(17,334)	(14,849)	(14,104)	(14,104)
% of total assets	0.25%	6.84%	(7.04)%	(6.02)%	(5.16)%	(4.9)%	(4.9)%

Foreign currency-denominated non-trading bank accounts[(1)]

	As of December 31, 2019					
	0-3 Months	3-6 Months	6-12 Months	1-3 Years	Over 3 Years	Total
	(in millions of U.S. dollars, except percentages)					
Interest-earning assets	24,379	8,246	3,055	3,809	5,213	44,702
Interest-bearing liabilities	24,116	5,626	5,071	7,576	6,605	48,994
Sensitivity gap	263	2,619	(2,016)	(3,767)	(1,392)	(4,292)
Cumulative gap	263	2,883	867	(2,901)	(4,292)	(4,292)
% of total assets	0.59%	6.45%	1.94%	(6.49)%	(9.60)%	(9.60)%

Note:

(1) Includes merchant banking accounts.

Duration Gap Analysis

The Bank performs a duration gap analysis to measure the differential effects of interest rate risk on the market value of its assets and liabilities by examining the difference between the durations of the Bank's interest-earning assets and those of its interest-bearing liabilities, which durations represent their respective weighted average maturities calculated based on their respective discounted cash flows using applicable yield curves. These measurements are done on a daily basis and for each operating department, account, product and currency, the respective durations of interest-earning assets and interest-bearing liabilities.

The following tables show duration gaps and market values of the Bank's Won-denominated interest-earning assets and interest-bearing liabilities in its non-trading accounts as of December 31, 2019 and changes in these market values when interest rate increases by one percentage point.

Duration as of December 31, 2019 (for non-trading Won-denominated bank accounts[(1)])

	Duration as of December 31, 2019
	(in months)
Interest-earning assets	11.92
Interest-bearing liabilities	10.93
Gap	0.99

Note:

(1) Includes merchant banking accounts and derivatives for the purpose of hedging.

Market Value Analysis

The Bank performs a market value analysis to measure changes in the market value of the Bank's interest-earning assets compared to that of its interest-bearing liabilities based on the assumption of parallel shifts in interest rates. These measurements are done on a monthly basis.

Market Value as of December 31, 2019 (for non-trading Won-denominated bank accounts[(1)])

	Market Value as of December 31, 2019		
	Actual	1% Point Increase	Changes
		(in billions of Won)	
Interest-earning assets	315,803	312,879	(2,924)
Interest-bearing liabilities	308,499	305,830	(2,670)
Gap	7,304	7,049	(255)

Note:

(1) Includes merchant banking accounts and derivatives for the purpose of hedging.

Net Interest Income Simulation

The Bank performs net interest income simulation to measure the effects of the change in interest rate on its results of operations. Such simulation uses the deterministic analysis methodology to measure the estimated changes in the Bank's annual net interest income (interest income less interest expenses) under the current maturity structure, using different scenarios for interest rates (assuming parallel shifts) and funding requirements. For simulations involving interest rate changes, based on the assumption that there is no change in funding requirements, the Bank applies three scenarios of parallel shifts in interest rate: (1) no change, (2) a 1% point increase in interest rates and (3) a 1% point decrease in interest rates.

The following table illustrates by way of an example the simulated changes in the Bank's annual net interest income for 2019 with respect to Won-denominated interest-earning assets and interest-bearing liabilities, using the Bank's net interest income simulation model, assuming (a) the maturity structure and funding requirement of the Bank as of December 31, 2019 and (b) the same interest rates as of December 31, 2019 and a 1% point increase or decrease in the interest rates.

	Simulated Net Interest Income for 2019 (For Non-Trading Won-Denominated Bank Accounts[1])						
	Assumed Interest Rates			Change in Net Interest Income		Change in Net Interest Income	
	No Change	1% Point Increase	1% Point Decrease	Amount (1% Point Increase)	% Change (1% Point Increase)	Amount (1% Point Decrease)	% Change (1% Point Decrease)
	(in billions of Won, except percentages)						
Simulated interest income	8,738	10,298	7,178	1,560	17.86%	(1,560)	(17.86)%
Simulated interest expense	3,980	5,108	2,851	1,129	28.37%	(1,129)	(28.37)%
Net interest income	4,758	5,190	4,327	432	9.07%	(432)	(9.07)%

Note:

(1) Includes merchant banking accounts and derivatives entered into for the purpose of hedging.

The Bank's Won-denominated interest-earning assets and interest-bearing liabilities in non-trading accounts have a maturity structure that benefits from an increase in interest rates, because the re-pricing periods for interest-earning assets in the Bank's non-trading accounts are, on average, shorter than those of the interest-bearing liabilities in these accounts. This is primarily due to a sustained low interest rate environment in the recent years in Korea, which resulted in a significant increase in demand for floating rate loans (which tend to have shorter maturities or re-pricing periods than fixed rate loans) as a portion of the Bank's overall loans, which in turn led to the shortening, on average, of the maturities or re-pricing periods of the Bank's loans on an aggregate basis. As a result, the Bank's net interest income tends to decrease during times of a decrease in the market interest rates while the opposite is generally true during times of an increase in the market interest rates.

Interest Rate VaRs for Non-trading Assets and Liabilities

The Bank measures VaRs for interest rate risk from non-trading activities on a monthly basis. The following table shows, as of and for the year ended December 31, 2019, the VaRs of interest rate mismatch risk for other assets and liabilities, which arises from mismatches between the re-pricing dates for the Bank's non-trading interest-earning assets (including available-for-sale investment securities) and those for its interest-bearing liabilities. Under the regulations of the FSC, the Bank includes in calculation of these VaRs interest-earning assets and interest-bearing liabilities in its bank accounts and its merchant banking accounts.

	VaR for 2019[1]			
	Average	Minimum	Maximum	As of December 31
	(in billions of Won)			
Interest rate mismatch — non-trading assets and liabilities	322	145	610	321

Note:

(1) One-year VaR results computed based on the interest rate risk in the banking book standardized approach presented by the Bank for International Settlements.

Equity Risk

Substantially all of the Bank's equity risk relates to its portfolio of common stock in Korean companies. As of December 31, 2019, the Bank held an aggregate amount of ₩230.5 billion of equity interest in unlisted foreign companies (including ₩221.0 billion invested in unlisted private equity funds).

The equity securities in Won held in the Bank's investment portfolio consist of stocks listed on the KRX KOSPI Market or the KRX KOSDAQ Market of the Korea Exchange and certain non-listed stocks. The Bank sets exposure limits for most of these equity securities to manage their related risk. As of December 31, 2019, the Bank held equity securities in an aggregate amount of ₩723.4 billion in its non-trading accounts, including equity securities in the amount of ₩187.9 billion that it held, among other reasons, for management control purposes and as a result of debt-to-equity conversion as a part of reorganization proceedings of the companies to which it had extended loans.

As of December 31, 2019, the Bank held Won-denominated convertible bonds in an aggregate amount of ₩182.5 billion and did not hold any Won-denominated exchangeable bonds or Won-denominated bonds with warrants, in each case, in its non-trading accounts. The Bank does not measure equity risk with respect to convertible bonds, exchangeable bonds or bonds with warrants, and the interest rate risk of these equity-linked securities are measured together with the other debt securities. As such, the Bank measures interest rate risk VaRs but not equity risk VaRs for these equity-linked securities.

Liquidity Risk Management

Liquidity risk is the risk of insolvency, default or loss due to disparity between inflow and outflow of funds, including the risk of having to obtain funds at a high price or to dispose of securities at an unfavorable price due to lack of available funds. The Bank seeks to minimize liquidity risk through early detection of risk factors related to the sourcing and managing of funds that may cause volatility in liquidity and by ensuring that it maintains an appropriate level of liquidity through systematic management. In addition, in order to preemptively and comprehensively manage liquidity risk, the Bank measures and monitors liquidity risk management using various indices, including the "limit management index," "early warning index" and "monitoring index."

The Bank applies the following basic principles for liquidity risk management:

- raise funds in sufficient amounts, at the optimal time at reasonable costs;
- maintain liquidity risk at appropriate levels and preemptively manage them through a prescribed risk limit system and an early warning signal detection system;
- secure stable sources of revenue and minimize actual losses by implementing an effective asset-liability management based on diversified sources of funding with varying maturities;
- monitor and manage daily and intra-daily liquidity positions and risk exposures for timely payment and settlement of financial obligations due under both normal and crisis situations;

- conduct periodic liquidity stress test in anticipation of any potential liquidity crisis and establish and implement contingency funding plans in case of an actual crisis; and

- consider liquidity-related costs, benefits of and risks in determining the pricing of its products and services, performance evaluations and approval of launching of new products and services.

The Bank manages liquidity risk in accordance with the risk limits and guidelines established internally and by the relevant regulatory authorities. Pursuant to principal regulations applicable to banks as promulgated by the FSC, the Bank is required to maintain a liquidity coverage ratio, a foreign currency liquidity coverage ratio and a net stable funding ratio. The Bank is required to maintain the relevant ratios above certain minimum levels.

The Bank manages its liquidity risk within the limits set on Won and foreign currency accounts in accordance with the regulations of the FSC. The FSC implemented a minimum liquidity coverage ratio requirement for Korean banks, including the Bank, of at least 90.0% as of January 1, 2017, 95.0% as of January 1, 2018 and 100.0% as of January 1, 2019. The FSC defines liquidity coverage ratio as high quality liquid assets that can be immediately converted into cash with little or no loss in value, as divided by the net amount of cash outflow for the next 30 day period, under the stress level established according to the liquidity coverage ratio, pursuant to the Regulation on the Supervision of the Banking Business, which was amended as of June 28, 2016 to implement the liquidity coverage ratio requirements under Basel III. In addition to the liquidity coverage ratio, the FSC introduced the net stable funding ratio into the Regulation on the Supervision of the Banking Business with effect from January 2018. Whereas liquidity coverage ratio is aimed at measuring liquidity for the next 30-day period, net stable funding ratio, calculated as the ratio of available stable funding to required stable funding, is aimed at measuring liquidity for the next one-year period. A bank's available stable funding is the portion of its capital and liabilities that are safely expected to remain with the bank for more than one year. A bank's required stable funding is the amount of stable funding that it is required to hold given the liquidity characteristics and residual maturities of its assets and the contingent liquidity risk arising from its off-balance sheet exposures. The Bank is required by the FSC to maintain a net stable funding ratio of at least 100%.

With respect to foreign currency liquidity coverage ratio, the Regulation on the Supervision of the Banking Business requires that financial institutions dealing with foreign exchange affairs (i.e., banks) whose foreign-currency denominated liabilities are equal to or greater than US$500 million or 5% of its total liabilities, as of the end of the immediately preceding half-year period, maintain a foreign currency liquidity coverage ratio of 60% or higher beginning January 1, 2017, 70% or higher beginning January 1, 2018 and 80% or higher beginning January 1, 2019. The term "foreign currency liquidity coverage ratio" means the ratio of high quality liquidity assets to the net cash outflow in respect of foreign-currency denominated assets and liabilities for the next 30 days.

The Treasury Department is in charge of liquidity risk management with respect to the Bank's Won and foreign currency funds. The Treasury Department submits the Bank's monthly funding and asset management plans to the ALM Committee for approval, based on the analysis of various factors, including macroeconomic indices, interest rate and foreign exchange movements and maturity structures of the Bank's assets and liabilities. The Risk Engineering Department measures the Bank's liquidity coverage ratio on a daily basis and net stable funding ratio on a monthly basis and reports whether the Bank is in compliance with the respective limits to the Risk Policy Committee, which sets and monitors the Bank's liquidity coverage ratio and net stable funding ratio on a monthly basis.

The following tables show the Bank's (i) average liquidity coverage ratio, (ii) average foreign currency liquidity coverage ratio and (iii) net stable funding ratio, each for the month of December 2019 in accordance with the regulations of the FSC.

Average Liquidity Coverage Ratio for the Month of December 2019

	For the Month of December 2019
	(in billions of Won, except percentages)
High quality liquid assets (A)	₩64,608
Net cash outflows over the next 30 days (B)	60,895
Cash outflow	82,245
Cash inflow	21,350
Liquidity coverage ratio (A/B)	106.10%

Average Foreign Currency Liquidity Coverage Ratio for the Month of December 2019

	For the Month of December 2019
	(in millions of U.S. dollars, except percentages)
High quality liquid assets (A)	$ 5,720
Net cash outflows over the next 30 days (B)	5,364
Cash outflow	13,240
Cash inflow	7,876
Liquidity coverage ratio (A/B)	106.65%

Net Stable Funding Ratio for the Month of December 2019

	For the Month of December 2019
	(in billions of Won, except percentages)
Available Stable Funding (A)	₩238,234
Required Stable Funding (B)	216,219
Net stable funding ratio (A/B)	110.18%

The Bank maintains diverse sources of liquidity to facilitate flexibility in meeting its funding requirements. The Bank funds its operations principally by accepting deposits from retail and corporate depositors, accessing the call loan market (a short-term market for loans with maturities of less than one month), issuing debentures and borrowing from the Bank of Korea. The Bank uses the funds primarily to extend loans or purchase securities. Generally, deposits are of shorter average maturity than loans or investments.

In addition to liquidity risk management under the normal market situations, the Bank has contingency plans to effectively cope with possible liquidity crisis. Liquidity crisis arises when the Bank would not be able to effectively manage the situations with its normal liquidity management measures due to, among other reasons, inability to access the Bank's normal sources of funds or epidemic withdrawals of deposits as a result of various external or internal factors, including a collapse in the financial markets or abrupt deterioration of the Bank's credit. The Bank has contingency plans corresponding to different stages of liquidity crisis: namely "alert stage," "imminent-crisis stage" and "crisis stage," based on the following liquidity indices:

- indices that reflect the market movements such as interest rates and stock prices;

- indices that reflect financial market sentiments, an example being the size of money market funds; and

- indices that reflect the Bank's internal liquidity condition.

Operational Risk Management

Operational risk is difficult to quantify and subject to different definitions. The Basel Committee defines operational risk as the risk of loss resulting from inadequate or failed internal processes, people and systems or from other external events. Similarly, the Bank defines operational risk as the risks related to its overall management other than credit risk, market risk, interest rate risk and liquidity risk. These include risks arising from system failure, human error, non-adherence to policy and procedures, fraud, inadequate internal controls and procedures or environmental changes and resulting in financial and non-financial loss. The Bank monitors and assesses operational risks related to its business operations, including administrative risk, information technology risk (including cyber security risk), managerial risk and legal risk, with a view to minimizing such losses.

To monitor and manage operational risk, the Bank maintains, a system of comprehensive policies and has in place a control framework designed to provide a stable and well-managed operational environment throughout the organization. Currently, the primary responsibility for ensuring compliance with the Bank's banking operational risk procedures remains with each of the business units and operational teams. In addition, the Audit Department, the Risk Management Department and the Compliance Department of the Bank also play important roles in reviewing and maintaining the integrity of the Bank's internal control environment.

The operational risk management system of the Bank is managed by the operational risk team under the Risk Management Department. The current system principally consists of risk control self-assessment, risk quantification using key risk indicators, loss data collection, scenario analysis and operational risk capital measurement. The Bank operates several educational and awareness programs designed to have all of its employees to be familiar with this system. In addition, the Bank has a designated operational risk manager at each of its departments and branch offices, who serves as a coordinator between the operational risk team at the headquarters and the employees in the front office and seeking to provide centralized feedback to further improve the operational risk management system.

As of December 31, 2019, the Bank has conducted risk control self-assessments on its departments as well as domestic and overseas branch offices, from which it collects systematized data on all of its branch offices, and uses the findings from such self-assessments to improve the procedures and processes for the relevant departments or branch offices. In addition, the Bank has accumulated risk-related data since 2003, improved the procedures for monitoring operational losses and is developing risk simulation models. In addition, the Bank selects and monitors, at the department level, approximately 186 key risk indicators.

The Audit Committee of the Bank, which consists of one standing director and two outside directors, is an independent inspection authority that supervises the Bank's internal controls and compliance with established ethical and legal principles. The Audit Committee performs internal audits of, among other matters, the Bank's overall management and accounting, and supervises its Audit Department, which assists the Bank's Audit Committee. The Bank's Audit Committee also reviews and evaluates the Bank's accounting policies and their changes, financial and accounting matters and fairness of financial reporting.

The Bank's Audit Committee, Audit Department and Compliance Department supervise and perform the following duties:

- general audits, including full-scale audits performed annually for the overall operations, sectional audits of selected operations performed as needed, and periodic and irregular spot audits;
- special audits, performed when the Audit Committee deems it necessary or pursuant to requests by the chief executive officer or supervisory authorities such as the FSS;
- day-to-day audits, performed by the standing member of the Audit Committee for material transactions or operations that are subject to approval by the heads of the Bank's operational departments or senior executives;
- real-time monitoring audits, performed by the computerized audit system to identify any irregular transactions and take any necessary actions; and
- self-audits as a self-check by each operational department to ensure its compliance with the Bank's business regulations and policies, which include daily audits, monthly audits and special audits.

In addition to these audits and compliance activities, the Bank's Risk Management Department designates operational risk management examiners to monitor the appropriateness of operational risk management frameworks and the functions and activities of the board of directors, relevant departments and business units, and conducts periodic checks on the operational risk and reports such findings. The Bank's Audit Department also reviews in advance proposed banking products or other business or service plans with a view to minimizing operational risk.

General audits, special audits, day-to-day audits and real-time monitoring audits are performed by the Bank's examiners, and self-audits are performed by the self-auditors of the relevant operational departments.

In addition to internal audits and inspections, the FSS conducts general annual audits of the Bank's operations. The FSS also performs special audits as the need arises on particular aspects of the Bank's operations such as risk management, credit monitoring and liquidity. In the ordinary course of these audits, the FSS routinely issues warning notices where it determines that a regulated financial institution or such institution's employees have failed to comply with the applicable laws or rules, regulations and guidelines of the FSS. The Bank has in the past received, and expects in the future to receive, such notices and it has taken and will continue to take appropriate actions in response to such notices. For example, in October 2018, the FSS requested the Bank to submit supporting documents in connection with allegations of inadequate compliance controls. In November 2018, the FSS notified the Bank of an institutional caution for alleged deficiencies in its customer due diligence. In December 2019, the FSS notified the Bank of an institutional caution and imposed an administrative fine of ₩3 billion for alleged prohibited activities, including promotional activities for specified money trusts, investment solicitation for derivatives and management of trust properties.

The Bank considers legal risk as a part of operational risk. The uncertainty of the enforceability of obligations of the Bank's customers and counterparties, including foreclosure on collateral, creates legal risk. Changes in laws and regulations could also adversely affect the Bank. Legal risk is higher in new areas of business where the law is often untested in the courts although legal risk can also increase in the Bank's traditional business to the extent that the legal and regulatory landscape in Korea changes and many new laws and regulations governing the banking industry remain untested. The Bank seeks to minimize legal risk by using stringent legal documentation, employing procedures designed to ensure that transactions are properly authorized and consulting legal advisers.

The Compliance Department operates the Bank's compliance system. This system is designed to ensure that all of the Bank's employees comply with the relevant laws and regulations. The compliance system's main function is to monitor the degree of improvement in compliance with the relevant laws and regulations, maintain internal controls (including ensuring that each department has established proper internal policies and that it complies with those policies) and educate employees about observance of the relevant laws and regulations. The Compliance Department also supervises the management, execution and performance of self-audits.

Upgrades of Risk Management System

In order to strengthen risk management of its overseas subsidiaries and effectively comply with local and domestic regulations, the Bank is in the process of laying out a global risk management system network, which records the risk data of its overseas subsidiaries. The Bank seeks to leverage the development of this system for further overseas expansion and stable growth of existing overseas subsidiaries. To date, the Bank has completed the development of such system for its subsidiaries in China, Japan, Vietnam, the United States, Canada, India, Europe and Mexico. The Bank also plans to expand the application of this system to its other overseas subsidiaries.

The Bank has also completed development of a system to calculate stressed VaR based on Basel II standards in order to prepare for stress situations such as the global financial crisis in 2008. The Bank has received approval for such system from the FSS and has been implemented since 2012.

In 2012, the Bank developed a system for improving collection and recovery of bad assets through enhanced loss given default (LGD) data processing. In addition, in 2012, the Bank received approvals from the FSS for upgrades to its credit evaluation modeling for risk assessment of small- to medium-sized enterprises that are not required to be audited by outside accounting firms and for SOHOs, which upgrades related to factoring in the credit profile of the head of such enterprises and SOHOs. In 2014, the Bank further upgraded the credit evaluation modeling for risk assessment of small- and medium-size enterprises that are not required to be audited by outside accounting firms by entirely revamping the modeling for enterprises subject to outside audits, enterprises that are not subject to outside auditors and enterprise heads. Such upgraded modeling was approved by the FSS, and the Bank began implementation of the upgraded system since 2014. In 2014, the Bank reclassified its credit evaluation models for risk assessment of enterprises into the following four categories: (i) IFRS (enterprises subject to external audits under K-IFRS), (ii) GAAP (enterprises subject to external audits under Generally Accepted Accounting Principles), (iii) small- and medium-size enterprises and (iv) SOHO. Such reclassification was approved by the FSS, and the Bank began to implement the system in 2015.

In addition, in 2013, the Bank obtained approval from the FSS to use an internal evaluation model with respect to Basel II credit risks related to the Bank's retail and SOHO exposures. In 2016, the Bank developed a new internal evaluation model and obtained approval from the FSS to use the new model with respect to Basel II credit risks related to the Bank's retail exposures. In addition, the Bank received another approval in 2016 for LGD data processing using the AIRB approach in order to reflect changes in economic conditions such as prolonged recovery periods and low interest rates, and the newly approved LGD data processing will replace existing LGD data processing for both retail and SOHO exposures.

The Bank also upgraded the asset and liability management system in 2012 in order to timely comply with Basel III, IFRS and other regulatory requirements as well as to upgrade the quality of risk-related data. In 2014, the Bank upgraded the liquidity coverage ratio and net stable funding ratio systems under Basel III in order to facilitate daily measurement and efficient management.

Following the approval by the FSS of the advanced measurement approach for risk management, the Bank has re-established the operational risk management system in order to further enhance its operational risk management capabilities.

MANAGEMENT AND EMPLOYEES

Management

Board of Directors

The Bank is managed by the Board of Directors of the Bank (the "**Board**"), which is responsible for policy and strategic matters, has the ultimate responsibility for the administration of the affairs of the Bank and oversees the day-to-day operations through several governing bodies. The address for each of the Directors of the Board is: c/o Shinhan Bank, 20, Sejong-Daero 9-Gil, Jung-Gu, Seoul, Korea 04513.

The Board is comprised of two Executive Directors, one Non-Standing Director and six Outside Directors.

The Executive Directors and Non-Standing Director are elected for a renewable term of up to three years as determined at the general meeting of the Bank's shareholders. The term of office for Outside Directors is up to two years. The Outside Director may be reappointed on a year-by-year basis up to six years. The Director who is a standing member of the Audit Committee (as described below) is elected for a renewable term of up to three years. The Board meets at least once every quarter and additional extraordinary meetings can be convened at the request of the chairman of the Board.

The Board has established four committees to carry out duties for the purpose of supporting the administration of various Board responsibilities: an Audit Committee, a Risk Management Committee, an Executive Recommendation Committee and a Compensation Committee.

The purpose of the Audit Committee is to (i) establish internal audit plans, carry out such plans, evaluate the results, take appropriate follow-up measures and propose appropriate reforms, (ii) evaluate and propose appropriate reforms regarding the comprehensive system of internal controls, (iii) approve the appointment(s) of external auditor(s) and (iv) perform various other functions similar to the foregoing.

The purpose of the Risk Management Committee is to (i) review risk, evaluation and limit policies of the Bank, (ii) review asset liability management and credit and market risk measures, and (iii) regulate asset quality, risk exposure and problem assets.

The purpose of the Executive Recommendation Committee is to nominate and recommend candidates for the President of the Bank, Outside Directors and members of the Audit Committee.

The purpose of the Compensation Committee is to evaluate management's performance and fix appropriate executive compensation, including incentives and bonuses.

As of the date of this offering circular, the Bank had two Executive Directors, who are full-time employees of the Bank and hold the executive position listed below.

Executive Director and Chief Executive Officer

Name	Age	Position	Executive Director Since	Date Term Ends
Ok Dong Jin	59	President, Chief Executive Officer and Executive Director	March 26, 2019	December 31, 2020

Ok Dong Jin has been the Bank's President, Chief Executive Officer and Executive Director since March 26, 2019. Mr. Jin previously served as Vice President of Shinhan Financial Group and Head of the Bank's Management Support Group. Mr. Jin received his bachelor's degree in business administration from Korea National Open University and received a master's degree in business administration from Chung-Ang University.

Executive Director and Member of the Audit Committee

Name	Age	Position	Executive Director Since	Date Term Ends
Chang Eon Heo	60	Executive Director and standing member of the Audit Committee	January 1, 2018	December 31, 2020

Chang Eon Heo has been the Bank's Executive Director and standing member of the Audit Committee since January 1, 2018. Mr. Heo previously served as President of the Financial Security Institute and Deputy Governor and General Manager of Insurance of the FSS. Mr. Heo received his master's degree in law from Korea University.

Non-Standing Director

As of the date of this offering circular, the Bank had one Non-Standing Director who is neither a full-time employee of the Bank nor holds an executive position with the Bank but is otherwise affiliated with the Bank.

Name	Age	Position	Executive Director Since	Date Term Ends
Yong Hun Noh	56	Vice President of Shinhan Financial Group	January 1, 2020	December 31, 2020

Yong Hun Noh has been the Vice President of Shinhan Financial Group and the Bank's Non-Director Executive Officer since January 1, 2020. Mr. Noh previously served as Head of the Bank's Global Business Division and Head of the Group's Global Business Division. Mr. Noh received his bachelor's degree in business from Yonsei University.

Outside Directors

As of the date of this offering circular, the Bank had six Outside Directors who are neither employees of the Bank nor hold executive positions with the Bank nor are otherwise affiliated with the Bank, as listed below.

Name	Age	Position	Director Since	Date Term Ends[1]
Hoh Peter In	52	Professor at Korea University Graduate School	March 23, 2016	March 2021
Seong Woo Lee	58	Professor at Dong-A University Law School	May 25, 2016	March 2021
WonShik Park	64	Former Senior Deputy Governor of Bank of Korea	March 21, 2018	March 2021
Ki Seok Seo	67	Chair-professor at Hanyang University	March 25, 2020	March 2021
Seung Han Yoon	62	Vice-Chairman of KICPA	March 25, 2020	March 2021
Hun Ya Lee	60	Former Executive Director of Korean Chamber of Commerce and Industry in Japan	March 25, 2020	March 2021

Note:

(1) The date on which each term will end will be the date of the general shareholders' meeting in the relevant year.

Hoh Peter In has been an Outside Director since March 23, 2016. Mr. In is currently a professor at Korea University Graduate School and is also a member of the FSC's Fintech policy advisory committee. Mr. In received his bachelor's degree and master's degree in computer science from Korea University and Korea University Graduate School, respectively, and a Ph.D. in computer science from University of Southern California.

Seong Woo Lee has been an Outside Director since May 25, 2016. Mr. Lee is currently a professor at Dong-A University Law School. Mr. Lee received his bachelor's degree, master's degree and Ph.D. in law from Seoul National University.

WonShik Park has been an Outside Director since March 21, 2018. Mr. Park was formerly a senior deputy governor of the Bank of Korea. Mr. Park received his bachelor's degree in politics and master's degree in law from Korea University and Ph.D. in economics Dongguk University.

Ki Seok Seo has been an Outside Director since March 25, 2020. Mr. Seo is currently a chair-professor at Hanyang University. Mr. Seo received his bachelor's degree in law from Seoul National University.

Seung Han Yoon has been an Outside Director since March 25, 2020. Mr. Yoon is currently the vice-chairman of KICPA. Mr. Yoon received his bachelor's degree and master's degree in business from Seoul National University.

Hun Ya Lee has been an Outside Director since March 25, 2020. Mr. Lee was formerly an executive director of the Korean Chamber of Commerce and Industry in Japan. Mr. Lee received his bachelor's degree from Osaka Art University.

All of the Outside Directors hold positions with companies or organizations other than the Bank (the principal such positions are specified above).

Management

As of the date of this offering circular, the management of the Bank consists of 22 Non-Director Executive Officers.

Non-Director Executive Officers	**Age**	**Department**	**Executive Officer Since**	**Date Term Ends**
Woo Hyuk Park	56	Retail Banking Group	January 1, 2020	December 31, 2021
Myong Goo Lee	56	Digital Group	January 1, 2016	December 31, 2021
Dong Ki Jang	56	Global Markets & Securities Group	January 1, 2019	December 31, 2021
Woon Jin Jeong	55	Global Investment Banking Group	January 1, 2018	December 31, 2021
Im Keun Kim	56	Risk Management Group	January 1, 2020	December 31, 2021
Soon Woo Lee	57	Chief Compliance Officer	January 1, 2019	December 31, 2020
Jae Hak Lee	57	Credit Analysis & Assessment Group	January 1, 2019	December 31, 2020
Mi Hwa Wang	55	Wealth Management Group	January 1, 2019	December 31, 2020
Man Geun Jeong	55	Trust Business Group	January 1, 2019	December 31, 2020
Ji Ho Jeong	56	Global Business Group	January 1, 2019	December 31, 2020
Byeong Cheol Lee	57	Brand Strategy Group	January 1, 2019	December 31, 2020
Hee Soo Lee	56	Sales Group	January 1, 2019	December 31, 2020
Du Wone Bae	56	Investment Product & Service Group	January 1, 2019	December 31, 2020
Dong Uk Choi	56	Large Corporate Banking & International Trade Business Group	January 1, 2019	December 31, 2020
Kyoung Sun Cho	55	Management Support Group	January 1, 2019	December 31, 2020
Hyo Ryul Ahn	54	Retirement Pension Group	January 1, 2018	December 31, 2021
Yeon Sik Shin	56	Corporate Banking Group	June 1, 2019	December 31, 2021
Sang Ryul Choi	56	Institutional Banking Group	January 1, 2020	December 31, 2021
Hyun Joon Park	54	Consumer Protection Group	January 1, 2020	December 31, 2021
Si Hyung Bae	55	ICT Group	January 1, 2020	December 31, 2021
Sang Hyuk Jung	55	Management Planning Group	January 1, 2020	December 31, 2021
Hee Jung Shin	54	Information Security Division	January 1, 2020	December 31, 2021

Woo Hyuk Park has been the Bank's Deputy President and Non-Director Executive Officer since January 1, 2020. Mr. Park previously served as Executive Vice President of Shinhan Financial Group and Head of the Bank's Management Support Group and Community Promotion Division. Mr. Park received his bachelor's degree in economics from Kyunghee University.

Myong Goo Lee has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2016. Mr. Lee previously served as Managing Director of the Bank's Information Security Division and General Manager of the Bank's IT Business Development Department and IT Information Development Department, respectively. Mr. Lee graduated from Duksoo Commercial High School.

Dong Ki Jang has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2019. Mr. Jang previously served as Vice President of Shinhan Financial Group and Head of the Bank's Capital Market & Trading Division. Mr. Jang received his bachelor's degree in economics from Seoul National University.

Woon Jin Jeong has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2018. Mr. Jeong previously served as Head of the Bank's Planning & Coordination Department and General Manager of the Bank's Gangnam Corporate Banking Center. Mr. Jeong received his bachelor's degree in economics from Seoul National University.

Im Keun Kim has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2020. Mr. Kim previously served as Executive Vice President of Shinhan Financial Group and General Manager of Risk Management Department. Mr. Kim received his master's degree in statistics from Korea University.

Soon Woo Lee has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2019. Mr. Lee previously served as General Manager of the Bank's Audit Department and Compliance Department. Mr. Lee received his bachelor's degree in law from Korea University.

Jae Hak Lee has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2019. Mr. Lee previously served as Head of the Bank's Credit Support Division and General Manager of the Bank's Corporate Banking Department. Mr. Lee received his bachelor's degree from Seoul Digital University.

Mi Hwa Wang has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2019. Ms. Wang previously served as Head of the Bank's Ilsan Business Division and General Manager of the Bank's Wealth Management. Ms. Wang graduated from Busanjin Girls' Commercial High School.

Man Geun Jeong has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2019. Mr. Jeong previously served as Head of the Bank's Honam Business Division and General Manager of the Bank's Gwangju Banking Center. Mr. Jeong received his bachelor's degree in business administration from Korea National Open University.

Ji Ho Jeong has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2019. Mr. Jeong previously served as Head of the Bank's International Trade Business Division and General Manager of the Bank's Global Business Development Department. Mr. Jeong received his bachelor's degree in business administration from Korea University.

Byeong Cheol Lee has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2019. Mr. Lee previously served as Head of the Bank's Institutional Banking Division III and General Manager of the Bank's Incheon Metropolitan City Hall Branch. Mr. Lee received his bachelor's degree in law from Korea National Open University and received a master's degree in law from Soongsil University.

Hee Soo Lee has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2019. Mr. Lee previously served as Head of the Bank's Incheon Business Division and General Manager of the Bank's Retail Banking Center. Mr. Lee received his bachelor's degree in public administration from Konkuk University.

Du Wone Bae has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2019. Mr. Bae previously served as Head of the Bank's Gangdong Business Division and General Manager of Shinhan Private Wealth Management Seocho Center. Mr. Bae received his bachelor's degree in international trade from Keimyung University.

Dong Uk Choi has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2019. Mr. Choi previously served as Head of the Bank's Large Corporate 3 Business Division and General Manager of the Bank's Sogong-Dong Banking Center. Mr. Choi received his bachelor's degree in in business administration from Kyungpook National University.

Kyoung Sun Cho has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2019. Ms. Cho previously served as Head of the Bank's Digital Contact Division and General Manager of the Bank's Wondang Banking Center. Ms. Cho received her bachelor's degree in in business administration from Sungkyunkwan University.

Hyo Ryul Ahn has been the Bank's Managing Director and Non-Director Executive Officer since January 1, 2018. Mr. Ahn previously served as General Manager of the Bank's Retail Banking Department and Sales Promotion Department. Mr. Ahn received his bachelor's degree in economics from Korea University.

Yeon Sik Shin has been the Bank's Executive Vice President since January 1, 2020 and Non-Director Executive Officer since June 1, 2019. Mr. Shin previously served as Head of Retirement Pension Group (as Managing Director and Non-Director Executive Officer) and Head of the Large Corporate 4 Business Division. Mr. Shin received his bachelor's degree in commerce and trade from Chungbuk National University.

Sang Ryul Choi has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2020. Mr. Choi previously served as Head of the Bank's Daegu-Kyungbuk Business Division and General Manager of the Bank's Changwon Chungang Retail Banking Center. Mr. Choi received his bachelor's degree in tax affairs from Daekyung University.
Hyun Joon Park has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2020. Mr. Park previously served as Head of the Large Corporate 1 Business Division and Head of the Bank's Seocho Business Division. Mr. Park received his bachelor's degree in business administration from Seoul National University.

Si Hyung Bae has been the Bank's Executive Vice President and Non-Director Executive Officer since January 1, 2020. Mr. Bae previously served as Head of the Bank's ICT Division and General Manager of the Bank's ICT Planning Department. Mr. Bae graduated from Duksoo Commercial High School.

Sang Hyuk Jung has been the Bank's Managing Director and Non-Director Executive Officer since January 1, 2020. Mr. Jung previously served as General Manager of the Bank's Secretary's Office and General manager of the Bank's Seongsudong Corporate Banking Center. Mr. Jung received his bachelor's degree in international economics from Seoul National University.

Hee Jung Shin has been the Bank's Managing Director and Non-Director Executive Officer since January 1, 2020. Mr. Shin previously served as General Manager of the Bank's West-Jamsil Retail Banking Center and General Manager of the Bank's ICT Planning Department. Mr. Shin received his bachelor's degree in business administration from Chungbuk National University.

Audit Committee

The Bank has an Audit Committee under the Board. The rights and responsibilities of the Audit Committee include the following: (i) conduct the audit of accounting and business of the Bank, (ii) investigate the agenda and documents to be submitted at general shareholders meetings and state at general shareholders meetings its opinion on whether there exists any violation of laws, regulations or articles of incorporation or remarkable illegality, (iii) demand the convening of extraordinary shareholders meetings, (iv) request reports on business of subsidiaries and if necessary, investigate business or status of properties of subsidiaries, (v) approve the appointment of external auditors and (vi) handle other matters delegated by the Board.

As of the date of this offering circular, the Audit Committee of the Bank consists of the following members.

Name	Age	Position	Audit Committee Member Since	Date Term Ends
Yong Hun Noh	56	Member of the Audit Committee; Non-standing director	March 25, 2020	December 31, 2020
Seung Han Yoon	62	Member of the Audit Commitee	March 25, 2020	December 31, 2020
Chang Eon Heo	60	Member of the Audit Committee; Executive director	January 1, 2018	December 31, 2020

Risk Management Committee

The Risk Management Committee currently consists of two Outside Directors, Hoh Peter In and Seong Woo Lee, and one Non-Standing Director, Yong Hun Noh. The committee oversees and makes determinations on significant issues relating to the Bank's comprehensive risk management function. In order to ensure the Bank's stable financial condition and to maximize its risk-adjusted profits, the committee monitors the Bank's overall risk exposure and reviews the Bank's compliance with risk policies and processes. In addition, the committee examines and amends risk and control strategies and policies and the Bank's overall risk management system, evaluates whether each risk is at an adequate level and reviews risk-based capital allocations. The committee holds a regular meeting every quarter.

Executive Recommendation Committee

The Executive Recommendation Committee is comprised of four Outside Directors and one Non-Standing Director. The committee currently consists of five directors, namely Hoh Peter In, Seung Han Yoon, Seong Woo Lee, WonShik Park and Yong Hun Noh. The committee recommends candidates for the President of the Bank, the Bank's Outside Director positions and the Bank's Audit Committee positions to be nominated at the general meeting of the Bank's shareholders. Resolutions require a majority of votes cast at a meeting of a majority of the members present. However, resolutions require at least two-thirds of the votes of the committee members for the recommendation of candidates for the Bank's Audit Committee positions.

Compensation Committee

The Compensation Committee currently consists of two Outside Directors, Ki Seok Seo and Hun Ya Lee, and one Non-Standing Director, Yong Hun Noh. The committee evaluates management's performance and deliberates and decides the compensation of directors, including the performance-related compensation of the Bank's executive officers. The committee holds meetings as necessary.

Remuneration

The aggregate remuneration and benefits in kind granted by the Bank to its directors and executive officers in 2019 was ₩10,575 million.

Employees

As of December 31, 2019, the Bank's workforce consisted of 13,165 regular employees and 1,002 contract-based employees of the Bank. As of December 31, 2019, 9,464 employees were members of the Bank's labor union. The Bank maintains a good relationship with its labor union and there has been no material labor dispute in the past three years.

Share Ownership

All of the Bank's share capital is owned by Shinhan Financial Group.

Stock Options

Prior to April 1, 2010, Shinhan Financial Group granted stock options to select members of senior management. On March 16, 2016, the exercise period for all outstanding stock options expired, and there are currently no stock options outstanding.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

As of December 31, 2019, there were no loans outstanding made by the Bank to the members of the Bank's board of directors or the Bank's executive officers. There are no guarantees provided by the Bank and its consolidated subsidiaries for the benefit of any of the Bank's directors or executive officers. Other than housing-related legacy loans in the aggregate of ₩1 billion, none of the directors or executive officers has or has had any interest in any transactions effected by the Bank which are or were unusual in their nature or conditional or significant to the business of the Bank and which were effected during the current or immediately preceding year or were effected during an earlier year and remain in any respect outstanding or unperformed.

Directors, executive officers and certain employees of the Bank, as is the case with certain other subsidiaries of Shinhan Financial Group, receive from time to time shares of Shinhan Financial Group's common stock and/or stock options exercisable into such shares, as part of their compensation. See "*Management and Employees — Share Ownership" and "Management and Employees — Stock Options*."

As a subsidiary of Shinhan Financial Group, the Bank engages from time to time in ordinary course of business activities with other subsidiaries of Shinhan Financial Group, including cross-selling activities. See Note 41 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2017 and 2018 and Note 40 to the Bank's audited consolidated financial statements as of and for the years ended December 31, 2018 and 2019 included elsewhere in this offering circular.

SHINHAN FINANCIAL GROUP

Introduction

Shinhan Financial Group is one of the leading financial institutions in Korea in terms of total assets, revenues, profitability and capital adequacy, among others. Incorporated on September 1, 2001, Shinhan Financial Group is the first privately-held financial holding company to be established in Korea. Since inception, Shinhan Financial Group has developed and introduced a wide range of financial products and services in Korea and aimed to deliver comprehensive financial solutions to clients through a convenient one-portal network. According to reports by the FSS, Shinhan Financial Group is the largest financial services provider in Korea (as measured by consolidated total assets as of September 30, 2019) and operates the second largest banking business (as measured by consolidated total assets as of September 30, 2019) and the largest credit card business (as measured by the total credit purchase volume in 2019) in Korea.

Shinhan Financial Group has experienced substantial growth through several mergers and acquisitions. Most notably, Shinhan Financial Group's acquisition of Chohung Bank in 2003 has enabled Shinhan Financial Group to have the second largest banking operations in Korea. In addition, Shinhan Financial Group's acquisition in March 2007 of LG Card, the then largest credit card company in Korea, has enabled to have the largest credit card operations in Korea and significantly expand Shinhan Financial Group's non-banking business capacity so as to achieve a balanced business portfolio. In September 2018, Shinhan Financial Group announced the acquisition of a 59.15% interest in Orange Life Insurance, Ltd., the former Korean unit of ING Life Insurance, as part of its efforts to diversify and enhance its non-banking businesses. The acquisition was approved by the FSC on January 16, 2019 and closed on February 1, 2019. On January 28, 2020, Shinhan Financial Group acquired the remaining interests in Orange Life by effecting a comprehensive stock exchange under Articles 360-2 of the Korean Commercial Code whereby holders (other than us) of Orange Life's common stock transferred all of their shares to Shinhan Financial Group and in return receive shares of Shinhan Financial Group's common stock, and hence Orange Life has become Shinhan Financial Group's wholly owned subsidiary as of such date.

Shinhan Financial Group currently has 17 direct subsidiaries and 27 indirect subsidiaries offering a wide range of financial products and services, including commercial banking, corporate banking, private banking, credit card, asset management, brokerage and insurance services. Shinhan Financial Group believes that such breadth of services will help it to meet the diversified needs of the Group's present and potential clients. Shinhan Financial Group currently serves approximately 19 million active customers, which Shinhan Financial Group believes is the largest customer base in Korea, through 24,515 employees at 1,383 network branches group-wide. While over 80% of Shinhan Financial Group's revenues have been historically derived from Korea, it aims to serve the needs of the Group's customers through a global network of 219 offices in the United States, Canada, the United Kingdom, Japan, the People's Republic of China, Germany, India, Australia, Hong Kong, Vietnam, Cambodia, Kazakhstan, Singapore, Mexico, Uzbekistan, Myanmar, Poland, Indonesia, the Philippines and the United Arab Emirates.

History and Organization

On September 1, 2001, Shinhan Financial Group was formed as a financial holding company under the Financial Holding Companies Act, as a result of acquiring all of the issued shares of the following four entities from their former shareholders in exchange for shares of Shinhan Financial Group's common stock: (i) the Bank, a nationwide commercial bank listed on the Korea Exchange, (ii) Shinhan Securities Co., Ltd., a securities brokerage company listed on the Korea Exchange, (iii) Shinhan Capital Co., Ltd., a leasing company listed on the Korea Exchange Korean Securities Dealers Automated Quotations ("**KRX KOSDAQ**"), and (iv) Shinhan

Investment Trust Management Co., Ltd., a privately held investment trust management company. On September 10, 2001, the common stock of Shinhan Financial Group's holding company was listed on what is currently the KRX KOSPI Market.

Since its inception, Shinhan Financial Group has expanded its operations, in large part, through strategic acquisitions, establishing subsidiaries or formation of joint ventures. Shinhan Financial Group's key acquisitions, capital contributions and joint venture formations are described as below:

Date of Acquisition	Entity	Principal Activities	Method of Establishment
April 2002	Jeju Bank	Regional banking	Acquisition from Korea Deposit Insurance Corporation
July 2002	Shinhan Investment Corp.(1)	Securities and investment	Acquisition from the SsangYong Group
August 2002	Shinhan BNP Paribas Investment Trust Management Co., Ltd.(2)	Investment advisory	50:50 joint venture with BNP Paribas
August 2003	Chohung Bank	Commercial banking	Acquisition from creditors
December 2005	Shinhan Life Insurance	Life insurance services	Acquisition from shareholders
March 2007	LG Card	Credit card services	Acquisition from creditors
January 2012	Tomato Mutual Savings Bank(3)	Savings bank	Purchase and assumption of assets and liabilities from creditors
January 2013	Yehanbyoul Savings Bank(4)	Savings bank	Acquisition from Korea Deposit Insurance Corporation
October 2017	Shinhan REITs Management	Real estate asset management	Newly established
February 2019	Orange Life Insurance(5)	Life insurance services	Acquisition from majority shareholders
May 2019	Asia Trust(6)	Real estate trust business	Acquisition from majority shareholders
August 2019	Shinhan AI	Investment advisory	Incorporated and joined as a wholly-owned subsidiary

Notes:

(1) Renamed as Shinhan Investment Corp. from Goodmorning Shinhan Securities Co., Ltd. effective August 2009.

(2) In January 2009, SH Asset Management Co., Ltd. and Shinhan BNP Paribas Investment Trust Management merged to form Shinhan BNP Paribas Asset Management Co., Ltd.

(3) Shinhan Hope Co., Ltd. was established on December 12, 2011, to purchase and assume certain assets and liabilities of Tomato Mutual Savings Bank. On December 28, 2011, Shinhan Hope Co., Ltd. obtained a savings bank license, changed its name to Shinhan Savings Bank and became Shinhan Financial Group's direct subsidiary.

(4) In January 2013, Shinhan Financial Group entered into a share purchase agreement with Korea Deposit Insurance Corporation for the acquisition of Yehanbyoul Savings Bank, a savings bank located in Korea, for ₩45.3 billion, and received regulatory approval to merge Yehanbyoul Savings Bank into Shinhan Financial Group's existing subsidiary Shinhan Saving Bank. On April 1, 2013, Shinhan Savings Bank and Yehanbyoul Savings Bank merged into a single entity, with Yehanbyoul Savings Bank being the surviving entity and the newly merged bank being named Shinhan Savings Bank.

(5) In September 2018, Shinhan Financial Group announced the acquisition of a 59.15% interest in Orange Life Insurance, Ltd., the former Korean unit of ING Life Insurance. The acquisition was approved by the FSC on January 16, 2019 and closed on February 1, 2019. Upon closing, Orange Life Insurance became Shinhan Financial Group's direct subsidiary. On January 28, 2020, Shinhan Financial Group acquired the remaining interests in Orange Life by effecting a comprehensive stock exchange under Articles 360-2 of the Korean Commercial Code whereby holders (other than us) of Orange Life's common stock transferred all of their shares to Shinhan Financial Group and in return receive shares of Shinhan Financial Group's common stock, and hence Orange Life has become Shinhan Financial Group's wholly owned subsidiary as of such date.

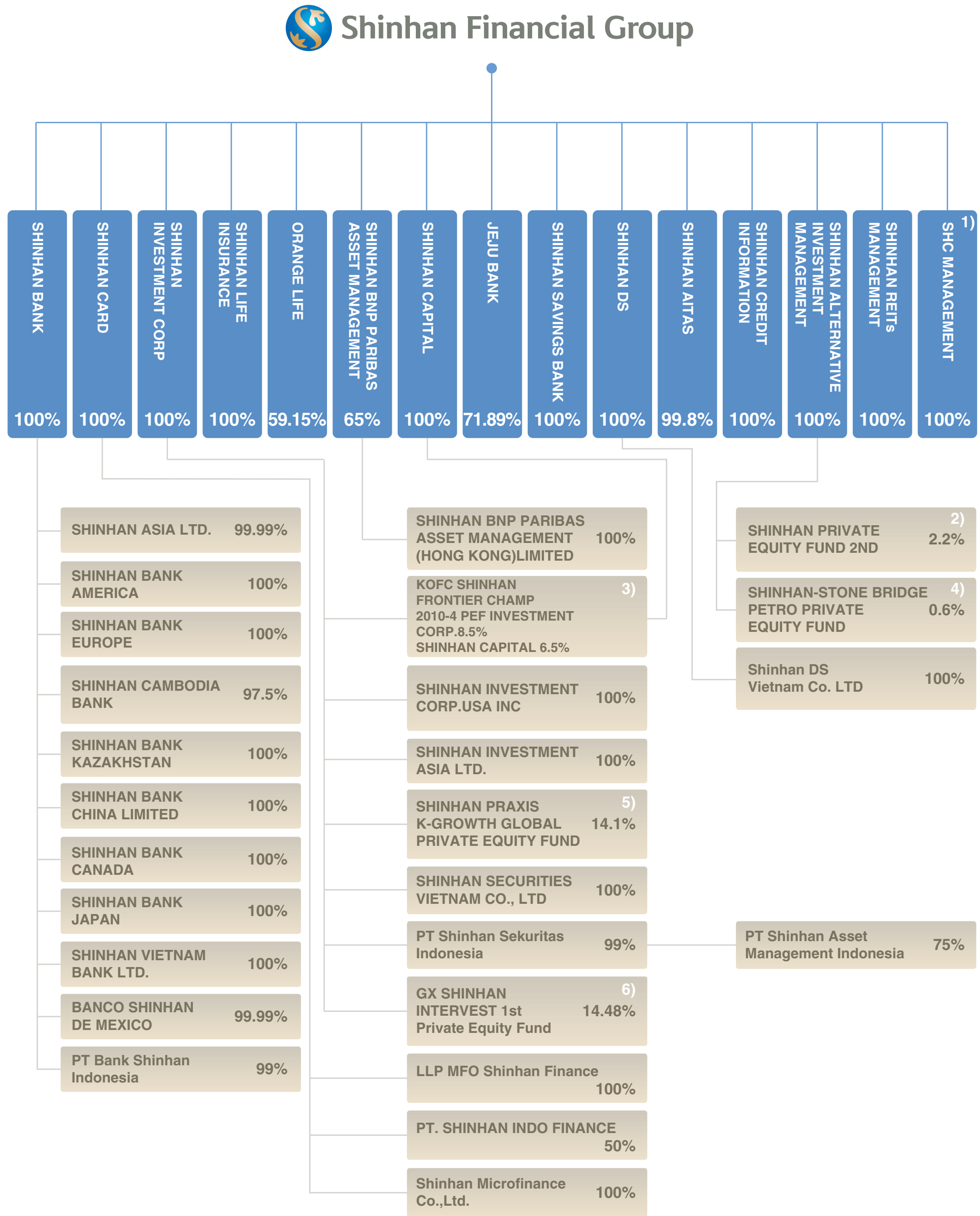
(6) In October 2018, Shinhan Financial Group announced the acquisition of a 60.0% interest in Asia Trust. Co. Ltd. According to the transaction agreement, Shinhan Financial Group seeks to complete the acquisition by acquiring the remaining 40.0% shares in Asia Trust by 2022. The acquisition was approved by the FSC on February 17, 2019 and closed on May 2, 2019. Upon closing, Asia Trust became Shinhan Financial Group's direct subsidiary.

All of Shinhan Financial Group's subsidiaries are incorporated in Korea, except for the following:

- Shinhan Asia Limited (incorporated in Hong Kong);
- Shinhan Bank America (incorporated in the United States);
- Shinhan Bank Canada (incorporated in Canada);
- Shinhan Bank (China) Limited (incorporated in the People's Republic of China);
- Shinhan Bank Europe GmbH (incorporated in Germany);
- Shinhan Bank Kazakhstan Limited (incorporated in Kazakhstan);
- Shinhan Bank Japan (incorporated in Japan);
- Shinhan Bank (Cambodia) PLC (incorporated in Cambodia);
- Shinhan Bank Vietnam Ltd. (incorporated in Vietnam);
- PT Bank Shinhan Indonesia (incorporated in Indonesia);
- Banco Shinhan de Mexico (incorporated in Mexico);

- LLP MFO Shinhan Card (incorporated in Kazakhstan);
- PT Shinhan Indo Finance (incorporated in Indonesia);
- Shinhan Microfinance Co., Ltd. (incorporated in Myanmar);
- Shinhan Investment Corp., USA Inc. (incorporated in the United States);
- Shinhan Investment Corp., Asia Ltd. (incorporated in Hong Kong);
- Shinhan Securities Vietnam Co., Ltd. (incorporated in Vietnam);
- PT Shinhan Sekuritas Indonesia (incorporated in Indonesia);
- Shinhan Asset Management Indonesia (incorporated in Indonesia);
- Shinhan BNP Paribas Asset Management (Hong Kong) Limited (incorporated in Hong Kong); and
- Shinhan DS Vietnam Co., Ltd. (incorporated in Vietnam).

As of the date hereof, Shinhan Financial Group has 17 direct and 27 indirect subsidiaries. The following diagram shows Shinhan Financial Group's organization structure as of December 31, 2019:



1) Currently in liquidation proceedings.

2) We and our subsidiaries currently own 32.6% in the aggregate.

3) We and our subsidiaries currently own 34.6% in the aggregate.

4) We and our subsidiaries currently own 1.8% in the aggregate.

5) We and our subsidiaries currently own 18.9% in the aggregate.

6) We and our subsidiaries currently own 25.27% in the aggregate.

The following table sets forth certain information relating to the beneficial ownership of Shinhan Financial Group's common shares (unless otherwise indicated) as of December 31, 2019.

Name of Shareholder	Number of Common Shares Beneficially Owned	Beneficial Ownership (%)
National Pension Service[1]	47,063,799	9.92%
BlackRock Fund Advisors[2]	25,051,282	5.28
Shinhan Financial Group Employee Stock Ownership Association	24,252,302	5.11
BNP Paribas SA	16,826,276	3.55
Citibank, N.A. (ADR Department)	13,260,291	2.80
The Government of Singapore	12,030,695	2.54
Norges Bank	8,739,929	1.84
Samsung Asset Management	8,285,439	1.75
Vanguard Total International Stock Index	6,799,594	1.43
People's Bank of China	5,603,568	1.18
Others	306,286,412	64.59%
Total[3]	474,199,587	100.00%

Notes:

(1) According to the filing of share ownership dated February 7, 2020, available through the Financial Supervisory Service's Data Analysis, Retrieval and Transfer System (DART), as of February 1, 2020, National Pension Service beneficially owns 47,094,821 common shares, or 9.76% beneficial ownership of the total number of shares issued as of February 1, 2020.

(2) Based on Form SC 13G filed by BlackRock, Inc. on February 6, 2020.

(3) Total number of common shares issued as of December 31, 2019. The total number of common shares increased to 482,432,493 shares as of January 28, 2020, due to the newly issued common shares in relation to a comprehensive stock exchange between Shinhan Financial Group and Orange Life Insurance.

Other than those listed above, no other person or entity known by us, jointly or severally, directly or indirectly own more than 1% of our issued and outstanding voting securities or otherwise exercise control or could exercise control over us. None of our shareholders have different voting rights.

SUPERVISION AND REGULATION

Principal Regulations Applicable to Banks

The banking system in Korea is governed by the Banking Act of 1950, as amended (the "**Banking Act**") and the Bank of Korea Act of 1950, as amended (the "**Bank of Korea Act**"). In addition, Korean banks are subject to the regulations and supervision of the Bank of Korea, the Bank of Korea's Monetary Policy Committee, the FSC and its executive body, the FSS.

The Bank of Korea, established in June 1950 under the Bank of Korea Act, performs the customary functions of a central bank. It seeks to contribute to the sound development of the national economy by price stabilization through establishing and implementing efficient monetary and credit policies. The Bank of Korea acts under instructions of the Monetary Policy Committee, the supreme policy-making body of the Bank of Korea.

Under the Bank of Korea Act, the Monetary Policy Committee's primary responsibilities are to formulate monetary and credit policies and to determine the operations, management and administration of the Bank of Korea. The FSC, which was established on April 1, 1998 as the Financial Supervisory Commission and later changed its name to the FSC on March 3, 2008, regulates commercial banks pursuant to the Banking Act, including establishing guidelines on capital adequacy of commercial banks, and promulgates regulations relating to supervision of banks. Furthermore, pursuant to the Amendment to the Government Organization Act and the Banking Act on May 24, 1999, the FSC, instead of the Ministry of Strategy and Finance, now regulates market entry into the banking business.

The FSS is subject to the instructions and directives of the FSC and carries out supervision and examination of commercial banks. In particular, the FSS sets requirements both for the prudent control of liquidity and for capital adequacy and establishes reporting requirements pursuant to the authority delegated to it under the FSC regulations, pursuant to which banks are required to submit annual reports on financial performance and shareholdings, regular reports on management strategy and non-performing loans, including write-offs, and management of problem companies and plans for the settlement of bad loans.

Under the Banking Act, approval to commence a commercial banking business or a long-term financing business must be obtained from the FSC. Commercial banking business is defined as the lending of funds acquired predominantly from the acceptance of deposits for a period not exceeding one year or, subject to the limitation established by the FSC, for a period between one year and three years. Long-term financing business is defined as the lending, for periods in excess of one year, of funds acquired predominantly from paid-in capital, reserves or other retained earnings, the acceptance of deposits with maturities of at least one year, or the issuance of bonds or other securities. A bank wishing to enter any business other than commercial banking and long-term financing businesses, such as the trust business, must obtain approval from the FSC. Approval to merge with any other banking institution, to liquidate, to close a banking business or to transfer all or a part of a business must also be obtained from the FSC.

If the Government deems a bank's financial condition to be unsound or if a bank fails to meet the applicable capital adequacy ratio set forth under Korean law, the government may order, among others,:

- capital increases or reductions;
- suspension of officers' performance of their duties and appointment of custodians;

- stock cancellations or consolidations;
- transfers of a part or all of business;
- sale of assets and bar on acquisition of high-risk assets;
- closures or downsizing of branch offices or workforce;
- mergers or becoming a subsidiary under the Financial Holding Companies Act of a financial holding company;
- acquisition of a bank by a third party;
- suspensions of a part or all of business operation; or
- assignments of contractual rights and obligations relating to financial transactions.

Capital Adequacy

The Banking Act requires nationwide banks to maintain a minimum paid-in capital of ₩100 billion and regional banks to maintain a minimum paid-in capital of ₩25 billion.

In addition to minimum capital requirements, all banks including foreign bank branches in Korea are required to maintain a prescribed solvency position. A bank must also set aside as its legal reserve an amount equal to at least 10% of its net profits after tax each time it pays dividends on net profits earned until such time when the reserve equals the amount of its total paid-in capital.

Under the Banking Act, the capital of a bank is divided into two categories: Tier I and Tier II capital. Tier I capital (typically referred to as "**Core Capital**") consists of (i) the capital that can absorb losses incurred by a bank such as capital, capital surplus and earned surplus generated from the issuance of common shares (collectively, "**Common Stock Capital**"), and (ii) the capital that can absorb the losses of a bank after depletion of the Common Stock Capital such as capital and capital surplus generated from the issuance of Tier I capital instruments satisfying the requirements designated by the FSS (collectively, "**Other Core Capital**"). Tier II capital (typically referred to as "**Supplementary Capital**") represents the capital which is equivalent to, but not included in, the Core Capital and can absorb losses incurred upon the liquidation of a bank such as capital and capital surplus generated from the issuance of Tier II capital instruments satisfying the requirements designated by the FSS and allowance for bad debts set aside for loans classified as "normal" or "precautionary."

Under the Detailed Regulations on the Supervision of the Banking Business, Tier I capital instruments must satisfy, among others, the following requirements in order to be recognized as Other Core Capital:

(i) the price for such instruments shall have been fully paid through the procedure for issuance, and the instruments shall be in a perpetual form with no cause triggering a step-up or redemption;

(ii) such instruments shall be bound by a special agreement on being subordinate to depositors, general creditors and subordinated debt of the bank (referring to a special agreement under which subordinated creditors' right to claim payment shall take effect only after unsubordinated creditors' claims are fully paid, when bankruptcy or any similar incident occurs; hereinafter the same shall apply) but shall not fall within liabilities exceeding assets at the time when bankruptcy is declared under the Debtor Rehabilitation and Bankruptcy Act;

(iii) the payment of dividends or interests shall be suspended from the date when the bank is designated as a "insolvent financial institution" under the Act on Structural Improvement of the Financial Industry of Korea or under the Depositor Protection act of Korea as applicable, or the FSS takes measures under the Regulations on the Supervision of the Banking Business such as the managerial improvement recommendation, the managerial improvement request, the managerial improvement order and the emergency measures against the bank to the date when the above-mentioned event is removed;

(iv) the payment of dividends or interests shall not be determined in connection with the credit rating of the bank;

(v) the dividends may only be paid out of distributable income;

(vi) the bank shall be able to revoke in its sole discretion the payment of dividends or interests at any time;

(vii) the cancellation of paying dividends must not impose restrictions on the bank except in relation to dividends to common stockholders;

(viii) the revocation of the payment of dividends or interests shall not be deemed as the event of defaults, and the bank shall be able to use in its sole discretion the amount which was revoked to pay as dividends or interests to redeem any other debts of the bank then due and payable;

(ix) such instruments shall not be redeemed within five years from the issuance date and the bank shall be able to determine in its sole discretion whether it redeems such instruments even after five years from the issuance date, and the instruments shall not be subject to any condition that arouse investors' expectation to have the instruments redeemed or any condition that imposes a burden of redemption upon the issuing bank in fact;

(x) the requirements prescribed in Appendix 3-5 (Trigger Events for Contingent Capital Securities) of the Detailed Enforcement Rules of Regulation on Supervision of Banking Business shall be satisfied;

(xi) the bank or the person who has de facto control over the bank shall not purchase capital instruments or provide a purchaser of such securities with funds for the purchase by providing a collateral or guarantee for payment or by lending a loan, shall not raise the priority of its claims, legally or economically, for the price paid for the securities, and shall not provide a collateral or guarantee to the purchasers of the securities directly or via a related company; and

(xii) such capital instruments shall have no condition that hinders the issuing bank's procurement or expansion of capital in the future.

Under the Detailed Regulations on the Supervision of the Banking Business, Tier II capital instruments must satisfy, among others, the following requirements in order to be recognized as Supplementary Capital:

(i) the procedure for issuance shall have been completed, the price for such capital instruments shall have been fully paid, and the capital instruments shall be bound by a special agreement of subordination to deposits and ordinary debts;

(ii) the maturity shall not be less than five years from the issuance date, and Tier II capital instruments shall not be redeemed within five years from the issuance date;

(iii) there is no condition to promote the bank to redeem such capital instruments such as a step-up provision, and the bank shall be able to determine in its sole discretion whether to redeem such instruments prior to the maturity date, and the instruments shall not be subject to any condition that arouse investors' expectation to have the instruments redeemed or any condition that imposes a burden of redemption upon the issuing bank in fact;

(iv) other than the case where the bank is subject to the bankruptcy or liquidation, the holder of Tier II capital instruments shall not have the right to require bank to pay the principal or interests of such instruments earlier than the original due date thereof;

(v) the payment of dividends or interests shall not be determined in connection with the credit rating of the bank;

(vi) the requirements prescribed in Appendix 3-5 (Trigger Events for Contingent Capital Securities) of the Detailed Enforcement Rules of Regulation on Supervision of Banking Business shall be satisfied;

(vii) the bank or any person or entity over which the bank exercises substantial control shall not purchase the capital instruments issued by such bank nor provide, directly or indirectly, the funds to acquire the capital instruments by providing any collateral or guaranty or loan in favor of the person or entity which tries to acquire such instruments; and

(viii) the bank shall not enhance, legally or economically, the payment priority of the capital instruments, nor provide, directly or indirectly through its affiliated company, any collateral or guaranty in favor of the person or entity which acquires such instruments.

All banks must meet standards regarding minimum ratios of Tier I and Tier II capital (less any capital deductions) to risk-weighted assets, determined in accordance with the FSC requirements that have been formulated based on the Bank for International Settlement ("**BIS**") Standards. These standards were adopted and became effective in 1996. Under these regulations, all domestic banks and foreign bank branches are required to meet the minimum ratio of Tier I and Tier II capital (less any capital deductions) to risk-weighted assets of 8%. Furthermore, as Basel III was adopted and is being implemented in stages in Korea since December 1, 2013, all banks in Korea are required to meet minimum ratios of common stock capital (less any capital deductions) and core capital (less any capital deductions) to risk-weighted assets as set out in the Regulation on the Supervision of the Banking Business. The required minimum ratio of common stock capital (less any capital deductions) to risk-weighted assets is 4.5%, and the required minimum ratio of core capital (less any capital deductions) to risk-weighted assets is 6.0%.

In addition, additional capital conservation buffer requirements have been implemented in stages from January 1, 2016 to January 1, 2019. Under such requirements, all banks in Korea are required to maintain a capital conservation buffer of 0.625% from January 1, 2016, which was gradually increased to 1.25% on January 1, 2017, 1.875% on January 1, 2018 and 2.5% on January 1, 2019.

Under the Regulation on the Supervision of the Banking Business and the Detailed Regulations promulgated thereunder, Korean banks apply the following risk-weight ratios in respect of their home mortgage loans:

(1) for those banks adopting a standardized approach for calculating credit risk-weighted assets, the risk-weight ratio of 35% (only in the case where the loan is fully secured by a first ranking mortgage); and

(2) for those banks adopting an internal ratings-based approach for calculating credit risk-weighted assets, a risk-weight ratio calculated with reference to the probability of default, loss given default and exposure at default, each as defined in the Detailed Regulations on the Supervision of the Banking Business.

In Korea, Basel II, a convention entered into by the Basel committee in June 2004 for the purpose of improving risk management and increasing capital adequacy of banks, was implemented in January 2008. Pursuant to Basel II, operational risk, such as inadequate procedure, loss risk by employees, internal system, occurrence of unexpected event, as well as credit risk and market risk, is taken into account in calculating the risk-weighted assets, in addition to maintaining the capital adequacy ratio of 8% for banks. Under Basel II, the capital requirements for credit risk can be calculated by the internal rating based (IRB) approach or the standardized approach.

Under the standardized approach, a home mortgage loan fully secured by a first ranking mortgage over the residential property is risk-weighted at 35%, but certain home mortgage loans with loan-to-value ratio exceeding 60% are risk weighted at 50% pursuant to an amendment of the Detailed Regulation on the Supervision of the Banking Business on December 31, 2018.

Under the Regulation on the Supervision of the Banking Business, banks shall set aside allowances for bad debts for each class of soundness in accordance with K-IFRS. If the amount for each class of soundness calculated in accordance with the following criteria exceeds the allowances for bad debts set aside, the excess amount shall, at the time of each settlement of accounts, be set aside as regulatory reserve for credit losses.

- 0.85% of normal credits (or 0.9% in the case of normal credits comprising loans to certain industries including construction, retail and wholesale sales, accommodations, restaurant, real estate and lease, 1.0% in the case of normal credits comprising loans to individuals and households, 2.5% in the case of normal credits comprising credit card loans and 1.1% in the case of normal credits comprising other credit card receivables);

- 7% of precautionary credits (or 10% in the case of precautionary credits comprising loans to individuals and households, 50% in the case of precautionary credits comprising credit card loans and 40% in the case of precautionary credits comprising other credit card receivables);

- 20% of substandard credits (or 10% in the case of substandard credits comprising assets for which the bank has the right to receive payment in priority pursuant to the Corporate Restructuring Promotion Act of Korea or Paragraph 180, Subparagraph 2 of the Debtor Rehabilitation and Bankruptcy Act of Korea (the "**Priority Assets**"), 65% in the case of substandard credits comprising credit card loans and 60% in the case of substandard credits comprising other credit card receivables);

- 50% of doubtful credits (or 25% in the case of doubtful credits comprising Priority Assets, 55% in the case of doubtful credits comprising loans to individuals and households and 75% in the case of doubtful credits comprising credit card loans and other credit card receivables); and

- 100% of estimated loss credits (or 50% in the case of estimated loss credits comprising of Priority Assets).

Furthermore, under the Regulation on the Supervision of the Banking Business, banks must maintain allowances for bad debts and regulatory reserve for credit losses in respect of their confirmed guarantees (including confirmed acceptances) and outstanding non-used credit lines in an aggregate amount calculated at the same rates applicable to normal, precautionary, substandard, doubtful and estimated loss credits comprising their outstanding loans and other credits as set forth above.

As of January 1, 2016, the FSC implemented Basel III requirements relating to accumulation of additional capital for systemically important banks and countercyclical capital buffer requirements. Each year, the FSC may designate banks with significant influence (based on size and connectivity with other financial institutions) on the domestic financial system as a domestic systemically important bank and require the accumulation of additional capital in accordance with the highest of: (i) ratio of common equity capital to risk-weighted assets, ranging from 0.0% to 2.0%, depending on the systematic importance evaluation score, (ii) if the bank's holding company is a domestic systemically important bank holding company, the capital ratio corresponding to the additional capital required for the bank holding company under the Financial Holding Company Supervision Regulations, or (iii) if the bank is also a global systemically important bank, as defined by the Basel Committee, the capital ratio as required by the Basel Committee. Shinhan Financial Group and the Bank were selected as a domestic systemically important bank holding company and domestic systemically important bank, respectively, from 2016 through 2020. According to the instructions of the FSC, domestic systematically important banks including the Bank have been required to maintain an additional capital buffer of 0.25% since January 1, 2016, with such buffer increased by 0.25% annually to reach 1.00% as of January 1, 2019. The FSC may also, upon quarterly review, determine and require banks to accumulate a required level of countercyclical capital buffer within the range of 0% to 2.5% of risk-weighted assets, taking into account factors such as the degree of increase in credit relative to the gross domestic product. Since March 2016, the FSC has maintained countercyclical capital buffer requirements at 0%, and the FSC has maintained the countercyclical capital buffer requirement at 0% for the first quarter of 2020. In addition, the Regulation on the Supervision of the Banking Business is expected to be amended during 2020 to introduce an additional countercyclical capital buffer requirement that specifically addresses the increase of credit in the retail sector. This is in addition to and separate from the existing general countercyclical capital buffer requirements that take into account the degree of increase in credit generally relative to the gross domestic product. The Detailed Regulation on the Supervision of the Banking Business was also amended on June 30, 2018 to add "concentration of risk in the retail sector" as an additional criterion when the FSS evaluates the risk management systems of Korean banks.

Liquidity

All banks are required to match the maturities of their assets and liabilities in accordance with the Banking Act in order to ensure adequate liquidity. Banks may not invest in excess of an amount exceeding 100% of their Tier I and Tier II capital (less any capital deductions) in stocks and other securities with a period remaining to maturity of over three years. However, this restriction does not apply to government bonds or to Monetary Stabilization Bonds issued by the Bank of Korea.

The FSC implemented a minimum liquidity coverage ratio requirement for Korean banks, including the Bank, of at least 90.0% as of January 1, 2017, 95.0% as of January 1, 2018 and 100.0% as of January 1, 2019. The FSC defines liquidity coverage ratio as high quality liquid assets that can be immediately converted into cash with little or no loss in value, as divided by the net amount of cash outflow for the next 30 day period, under the stress level established according to the liquidity coverage ratio, pursuant to the Regulation on the Supervision of the Banking Business, which was amended as of June 28, 2016 to implement the liquidity coverage ratio requirements under Basel III.

With respect to foreign currency liquidity coverage ratio, the Regulation on the Supervision of the Banking Business requires that financial institutions dealing with foreign exchange affairs (i.e., banks) whose foreign-currency denominated liabilities are equal to or greater than US$500 million or 5% of its total liabilities, as of the end of the immediately preceding half-year period, maintain a foreign currency liquidity coverage ratio of 60% or higher beginning January 1, 2017, 70% or higher beginning January 1, 2018 and 80% or higher beginning January 1, 2019. The term "foreign currency liquidity coverage ratio" means the ratio of high-liquidity assets to the net cash outflow in respect of foreign-currency denominated assets and liabilities for the next 30 days. In the case of financial institutions dealing with foreign exchange affairs whose foreign-currency denominated liabilities are less than US$500 million and less than 5% of its total liabilities, as of the end of the immediately preceding half-year period, the following ratios shall be maintained and foreign-currency denominated assets and liabilities shall be categorized and managed according to such different remaining maturities: (i) the ratio of assets for which remaining maturities are less than three months to liabilities for which remaining maturities are less than three months shall be at least 85%, and (ii) the assets for which remaining maturities are less than one month shall not exceeded liabilities for which the remaining maturities are less than one month by more than 10%.

The Monetary Policy Committee of the Bank of Korea is authorized to fix and alter minimum reserve requirements that banks must maintain against their deposit liabilities. The current minimum reserve ratio is 7.0% of average balances for Won-denominated demand deposits outstanding, 0.0% of average balances for Won-denominated employee asset establishment savings deposits, employee long-term savings deposits, employee house purchase savings deposits, long-term house purchase savings deposits, household long-term savings deposits and employee preferential savings deposits outstanding and 2.0% of average balances for Won-denominated time and savings deposits, mutual installments, housing installments and certificates of deposit outstanding. For foreign currency deposit liabilities, a 2.0% minimum reserve ratio is applied to savings deposits outstanding and a 7.0% minimum reserve ratio is applied to demand deposits, while a 1.0% minimum reserve ratio is applied for offshore accounts, immigrant accounts and resident accounts opened by foreign exchange banks.

Loan-to-Deposit Ratio

In December 2009, the FSS announced that it would introduce a new set of regulations on the loan-to-deposit ratio by amending the Regulation on the Supervision of the Banking Business ("**RSBB**") upon its determination that the overall liquidity of banks in Korea had become unstable due to the ongoing increase in the loan-to-deposit ratio resulting from banks expanding their asset size too competitively by granting mortgages on houses and loans to small- and medium-sized enterprises over the last couple of years. The RSBB, which was amended as of August 19, 2010 and December 26, 2014 and took effect on January 1, 2014 and January 1, 2015, respectively, requires banks with Won-denominated loans of not less than ₩2 trillion in value as of the last month of the immediately preceding quarter to maintain a ratio of Won-denominated loans (excluding certain types of loans using funds borrowed from Korea Development Bank or the Government or loans made under certain operational rules of Korea Federation of Banks) to Won-denominated deposits (excluding certificates of deposit) and the balance of the covered bonds under the Act on Issuance of Covered Bonds, the maturity of which is not less than five years (only in case when such financing from the issuance of covered bonds is used in Won currency and up to 1% of Won-denominated deposits) not more than 1:1. The Bank's loan-to-deposit ratio as of December 31, 2019 was 95.4%, based on monthly average balances.

Currently, in calculating the loan to deposit ratio, there is no differentiation between retail loans and corporate loans. However, the Regulation on the Supervision of the Banking Business was amended on July 12, 2018 to provide that, beginning on January 1, 2020, in calculating such loan to deposit ratio, retail loans and corporate loans are weighed differently, with retail loans subject to a multiple of 115% and corporate loans (excluding loans to SOHOs) subject to a multiple of 85%, thereby increasing the impact of retail loans and reducing the impact of corporate loans in calculating such ratio.

Financial Exposure to Any Single Customer and Major Shareholders

Under the Banking Act, the sum of material credit exposures by a bank, namely, the total sum of its credits to single individuals, legal entities or persons sharing credit risk with such individuals or legal entities such as companies belonging to the same enterprise groups as defined under the Monopoly Regulation and Fair Trade Act that exceed 10% of the sum of Tier I and Tier II capital (less any capital deductions), must not exceed five times the sum of Tier I and Tier II capital (less any capital deductions), subject to certain exceptions. Subject to certain exceptions, no bank is permitted to extend credit (including loans, guarantees, purchases of securities (only in the nature of a credit) and such other transactions which directly or indirectly create credit risk) in excess of 20% of the sum of Tier I and Tier II capital (less any capital deductions) to an individual or a legal entity, and no bank may grant credit in excess of 25% of the sum of Tier I and Tier II capital (less any capital deductions) to individuals, legal entities and companies that belong to the same enterprise group as defined in the Monopoly Regulations and Fair Trade Act.

Under the Banking Act, certain restrictions apply to extending credits to a major shareholder. The definition of a "major shareholder" is as follows:

- a shareholder holding (together with persons who have a special relationship with such shareholder as defined in the Presidential Decree of the Banking Act) in excess of 10% (or in the case of regional banks, 15%) in the aggregate of the bank's total issued and outstanding voting shares; or

- a shareholder holding (together with persons who have a special relationship with such shareholder as defined in the Presidential Decree of the Banking Act) more than 4% in the aggregate of the total issued and outstanding voting shares of a bank (other than a regional bank), where such shareholder is the largest shareholder or is able to actually control the major business affairs of the bank, for example, through appointment and dismissal of the chief executive officer or of the majority of the executives.

Under the Banking Act, banks are prohibited from extending credits in the amount greater than the lesser of (1) 25% of the sum of such bank's Tier I and Tier II capital (less any capital deductions) and (2) the relevant major shareholder's shareholding ratio multiplied by the sum of the bank's Tier I and Tier II capital (less any capital deductions) to a major shareholder (together with persons who have special relationship with such major shareholder as defined in the Presidential Decree of the Banking Act). Also, no bank is allowed to grant credit to its major shareholders in the aggregate in excess of 25% of its Tier I and Tier II capital (less any capital deductions).

When managing the credit risk of banks, among the methods for providing credit support by banks, a loan agreement, a purchase agreement for asset-backed commercial papers, purchase of subordinate beneficiary certificates, and assumption of liability by providing warranty against default under asset-backed securitization are examples of creating financial exposure to banks.

Interest Rates

Korean banks remain dependent on the acceptance of deposits as their primary source of funds. Currently, there are no legal controls on interest rates on bank loans in Korea, except for the cap of 24.0% per annum on interest rates under the Act on Lending Business.

Lending to Small- and Medium-sized Enterprises

When commercial banks (including the Bank) make Won-denominated loans to certain start-up, venture, innovative and other strategic small- and medium-sized enterprises specially designated by the Bank of Korea as "priority borrowers", the Bank of Korea generally provides the underlying funding to these banks at concessionary rates for up to 50% of all such loans made to the priority borrowers subject to a monthly-adjusted limit prescribed by the Bank of Korea (currently ₩5.9 trillion) provided that if such loans to priority borrowers made by all commercial banks exceed the prescribed limit for a given month, the concessionary funding for the following month will be allocated to each commercial bank in proportion to such bank's lending to priority borrowers two months prior to the time of such allocation, which has the effect that, if a particular bank lags other banks in making loans to priority borrowers, the amount of funding such bank can receive from the Bank of Korea at concessionary rates will be proportionately reduced.

Disclosure of Management Performance

For the purpose of enforcing mandatory disclosure of management performance so that the general public, especially depositors and stockholders, will be in a better position to monitor banks, the FSC requires commercial banks to disclose certain matters as follows:

- loans bearing no profit made to a single business group in an amount exceeding 10% of the sum of the bank's Tier I and Tier II capital (less any capital deductions) as of the end of the previous month (where the loan exposure to such borrower is calculated pursuant to the criteria under the Detailed Regulations promulgated under the Regulation on the Supervision of the Banking Business) except where the loan exposure to a single business group is not more than ₩4 billion; and

- any loss due to court judgments or similar decisions in civil proceedings in an amount exceeding 1% of the sum of the bank's Tier I and Tier II capital (less any capital deductions) as of the end of the previous month except where the loss is not more than ₩1 billion.

Restrictions on Lending

According to the Banking Act, commercial banks are prohibited from making any of the following categories of loans:

- loans made directly or indirectly on the pledge of a bank's own shares;

- loans made directly or indirectly to enable a natural or a legal person to buy the bank's own shares;

- loans made to any of the bank's officers or employees other than de minimis loans of up to (1) ₩20 million in the case of a general loan, (2) ₩50 million in the case of a general loan plus a housing loan, or (3) ₩60 million in the aggregate for general loans, housing loans and loans to pay damages arising from wrongful acts of employees in financial transactions;

- credit (including loans) secured by a pledge of shares of a subsidiary corporation of the bank or to enable a natural or juridical person to buy shares of a subsidiary corporation of the bank; and

- loans to any officers or employees of a subsidiary corporation of the bank, other than general loans of up to ₩20 million or general and housing loans of up to ₩50 million in the aggregate.

Recent Regulations Relating to Retail Household Loans

The FSC implemented a number of changes in recent years to the mechanisms by which a bank evaluates and report its retail household loan balances and has proposed implementing further changes. In order to rationalize the regulations on the housing loans, the FSC and the FSS provided administrative instructions in July 2014 with effect from August 1, 2014, which have been extended and amended several times, that all financial institutions including banks under the Banking Act were subject to the maximum loan-to-value ratio of 70% (irrespective of the location of the property, subject to certain exceptions) and the maximum debt-to-income ratio of 60% (only in respect of apartment units located in the greater Seoul metropolitan area, subject to certain exceptions). However, due to a rapid increase in the volume of loans secured by homes and other forms of housing, the FSC and the FSS implemented the following regulations designed to curtail extension of new or refinanced loans secured by housing by respectively amending the Regulation on the Supervision of the Banking Business and the Detailed Regulation on the Supervision of the Banking Business to replace the above administrative instructions in August 2017:

- as to loans secured by collateral of housing located nationwide, the loan-to-value ratio (the aggregate principal amount of loans secured by such collateral over the appraised value of the collateral) shall not exceed 70%;

- as to loans secured by collateral of housing located in "adjustment targeted areas", as designated by the government, the loan-to-value ratio for loans should not exceed 60%;

- as to loans secured by collateral of housing located in "overheated speculative districts" or "speculative districts", as designated by the government, the loan-to-value ratio for loans should not exceed 40%;

- as to loans secured by collateral of housing to be extended to a low income household satisfying certain requirements such as (i) in respect of the housing located in "adjustment targeted areas," the annual income of households being less than ₩60 million (and ₩70 million for first home buyers) and the value of housing being less than ₩500 million, and (ii) in respect of the housing located in "overheated speculative districts" or "speculative districts," the annual income of households being less than ₩70 million (and ₩80 million for first home buyers) and the value of housing being less than ₩600 million, the maximum loan-to-value ratio is 10% higher than the applicable loan-to-value ratios of 60% in "adjustment targeted areas" and 40% in "overheated speculative districts" or "speculative districts" described above;

- as to loans secured by collateral of housing to be extended to a household which has already received one or more loans secured by collateral of housing, the maximum loan-to-value ratio is 10% lower than the applicable loan-to-value ratios of 60% in "adjustment targeted areas" and 40% in "overheated speculative districts" or "speculative districts" described above;

- as to loans secured by collateral of housing (limited to an apartment) located in the greater Seoul metropolitan area, the borrower's debt-to-income ratio (calculated as (i) the aggregate annual total payment amount of (x) the principal of and interest on loans secured by such housing and existing mortgage and home equity loans and (y) the interest on other loans of the borrower over (ii) the borrower's annual income) shall not exceed 60%;

- as to loans secured by collateral of housing (limited to an apartment) located in "adjustment targeted areas", as designated by the government, the borrower's debt-to-income ratio shall not exceed 50%;

- as to loans secured by collateral of housing located in "overheated speculative districts" or "speculative districts", as designated by the government, the borrower's debt-to-income ratio shall not exceed 40%;

- as to loans secured by collateral of housing to be extended to a low income household, the maximum debt-to-income ratio is 10% higher than the applicable debt-to-income ratios of 50% in "adjustment targeted areas" and 40% in "overheated speculative districts" or "speculative districts" described above;

- as to loans secured by collateral of housing to be extended to a household which has already received one or more loans secured by collateral of housing, the maximum debt-to-income ratio is 10% lower than the applicable debt-to-income ratios of 50% in "adjustment targeted areas" and 40% in "overheated speculative districts" or "speculative districts" described above;

- as to apartments located in "speculative districts", as designated by the government, a household is permitted to have only one new loan secured by such apartment; and

- where a household has two or more loans secured by apartments located in "speculative districts", as designated by the government, the loan with the earliest maturity date must be repaid first and the number of loans must be eventually reduced to one.

As housing prices in the greater Seoul metropolitan area continued to rise despite the above measures, on December 16, 2019, the Government unveiled a tighter set of measures aimed at the housing market. According to these new measures, which became effective from December 17, 2019, no mortgage or home equity loans can be provided to purchase a new home located in any of the regulated areas to a household that already owns two or more housing units. For a household that already owns one housing unit, such loans can only be provided under very limited circumstances. Furthermore, the "speculative districts" and "overheated speculative districts" are further restricted by tighter loan-to-value ratios. If the market value of a home located in any of the "speculative districts" or "overheated speculative districts" being acquired is greater than ₩1.5 billion, no mortgage or home equity loans may be provided. For homes located in any of the "speculative districts" or "overheated speculative districts" with a market value equal or less than ₩1.5 billion but greater than ₩900 million, the loans can only cover 40% of the market value up to ₩900 million and 20% of any remaining value between ₩1.5 billion and ₩900 million. In addition to the foregoing restrictions, no mortgage loan applicant buying a home in any of the "speculative districts" or "overheated speculative districts" may incur a loan that will exceed 40% of his/her debt service ratio for homes with market values exceeding ₩900 million. Furthermore, on February 20, 2020, the Government announced additional countermeasures to curb housing prices in the "adjustment targeted areas", under which if the market value of a home located in any of the "adjustment targeted areas" being acquired is greater than ₩900 million, the loans can only cover 50% of the market value up to ₩900 million and 30% of any remaining value exceeding ₩900 million.

Restrictions on Investments in Property

A bank may possess real estate property only to the extent necessary for conducting its business; *provided that* the aggregate value of such real estate property must not exceed 60% of the sum of its Tier I and Tier II capital (less any capital deductions). Any property acquired by a bank (1) through the exercise of its rights as a secured party or (2) the acquisition of which is prohibited by the Banking Act must be disposed of within three years, unless otherwise provided by the regulations thereunder.

Restrictions on Shareholdings in Other Companies

Under the Banking Act, a bank may not own more than 15% of shares outstanding with voting rights of another company, except where, among other reasons:

- the company issuing such shares is engaged in a business that falls under the category of financial businesses set forth by the FSC (including companies which business purpose is to own equity interests in private equity funds); or

- the acquisition of shares by the bank is necessary for corporate restructuring of such company and is approved by the FSC.

In the above cases, a bank must satisfy either of the following requirements:

- the total investment in companies in which the bank owns more than 15% of the outstanding shares with voting rights does not exceed 20% of the sum of Tier I and Tier II capital (less any capital deductions); or

- the total investment in companies in which the bank owns more than 15% of the outstanding shares with voting rights does not exceed 30% of the sum of Tier I and Tier II capital (less any capital deductions) where the acquisition satisfies the requirements determined by the FSC.

The Banking Act provides that a bank using its bank accounts and its trust accounts is not permitted to acquire the shares issued by the Major Shareholder of such bank in excess of an amount equal to 1% of the sum of Tier I and Tier II capital (less any capital deductions).

Restrictions on Bank Ownership

Under the Banking Act, subject to certain exceptions, a single shareholder and persons who stand in a special relationship with such shareholder (as described in the Presidential Decree to the Banking Act) may acquire beneficial ownership of up to 10% of a national bank's total issued and outstanding shares with voting rights and up to 15% of a regional bank's total issued and outstanding shares with voting rights. The government, the Korea Deposit Insurance Corporation and financial holding companies qualifying under the Financial Holding Companies Act are not subject to such ceilings. However, non-financial business group companies – namely, (1) any same shareholder group with an aggregate net assets of all non-financial companies belonging to such group of not less than 25% of the aggregate net assets of all corporations that are members of such group; (2) any group with aggregate assets of all non-financial companies belonging to such group of not less than ₩2 trillion; (3) any mutual fund in which a same shareholder group, as described in items (1) and (2) above, owns more than 4% of the total shares issued and outstanding; (4) a private equity fund (under the FSCMA) where (i) the general partner of such private equity fund, (ii) the limited partner whose equity holding ratio in such private equity fund is 10% or more, or (iii) the limited partners, being member companies of a single group of companies that belong to the same conglomerate as defined in the Monopoly Regulations and Fair Trade Act, whose aggregate equity holding ratio in such private equity fund is 30% or more falls under either of item (1) to (3) above; or (5) a special purpose company of a private equity fund where a private equity fund, as described in item (4) above, owns 4% or more of the special purpose company's issued and outstanding shares or has actual control over the major business affairs of the special purpose company through, for example, appointment and dismissal of the officers — may not acquire beneficial ownership of shares of a national bank in excess of 4% of such bank's outstanding voting shares, provided that such non-financial business group companies may acquire beneficial ownership of:

- up to 10% of a national bank's outstanding voting shares with the approval of the FSC under the condition that such non-financial group companies will not exercise voting rights in respect of such shares in excess of the 4% limit; and

- in the event that a foreigner, as defined in the Foreign Investment Promotion Act, owns not less than 10% of a national bank's outstanding voting shares, up to 10% of such bank's outstanding voting shares without the approval of the FSC, and in excess of 10%, 25% or 33% of such bank's outstanding voting shares, with the approval of the FSC, up to the number of shares owned by such foreigner.

In addition, any person (whether a Korean national or a foreigner), with the exception of non-financial business group companies described above, may also acquire in excess of 10% of a national bank's total voting shares issued and outstanding, *provided that* an approval from the FSC is obtained in instances where the total holding exceeds 10% (or 15% in the case of regional banks), 25% or 33% of the bank's total voting shares issued and outstanding.

Deposit Insurance System

The Depositor Protection Act provides, through a deposit insurance system, insurance for certain deposits of banks in Korea. Under the Depositor Protection Act, all banks governed by the Banking Act, including the Bank, are required to pay to the Korea Deposit Insurance Corporation an insurance premium on a quarterly basis at such rate as determined by the Presidential Decree to the Depositor Protection Act, which shall not exceed 0.5% of the bank's insurable deposits in any given year. The current insurance premium is 0.02% of insurable deposits for each quarter. If the Korea Deposit Insurance Corporation pays the insured amount, it will acquire the claims of the depositors within the payment amount. Under current rules, the Korea Deposit Insurance Corporation insures only up to a total of ₩50 million per an individual for deposits and interest in a single financial institution, regardless of when the deposits were made and the size of the deposits.

Trust Business

A bank that intends to enter into the trust business must obtain the approval of the FSC. Trust activities of banks are governed by the FSCMA. Banks engaged in the banking business and trust business are subject to certain legal and accounting procedures requirements, including the following:

- under the Banking Act, the FSCMA and the Trust Act, assets accepted in trust by a bank in Korea must be segregated from its other assets in the accounts of such bank; accordingly, banks engaged in the banking and trust businesses must maintain two separate accounts, the "banking accounts" and the "trust accounts", and two separate sets of records which provide details of their banking and trust businesses, respectively; and

- assets comprising the trust accounts are not available to depositors or other general creditors of such bank in the event the trustee is liquidated or is wound up.

In the event that a bank qualifies and operates as a collective investment business entity, a trustee, a custodian or a general office administrator under the FSCMA, it is required to establish relevant operation and management systems to prevent potential conflicts of interest among the banking business, the collective investment business, the trustee or custodian business and general office administration. These measures include:

- prohibitions against officers, directors and employees of one particular business operation from serving as an officer, director and employee in another business operation, except where an officer or a director (1) serving in two or more business operations with no significant conflict of interest in accordance with the Presidential Decree on the FSCMA or (2) serving in a trustee business or a custodian business and simultaneously serving in a general office administrator business in accordance with the FSCMA;

- prohibitions against the joint use or sharing of computer equipment or office equipment; and

- prohibitions against the sharing of information by and among officers, directors and employees engaged in the different business operations.

A bank which qualifies and operates as a collective investment business entity may engage in the sale of beneficiary certificates of investment trusts which are managed by such bank. However, such bank is prohibited from engaging in the following activities:

- acting as trustee of an investment trust managed by such bank;

- purchasing with such bank's own funds beneficiary certificates of an investment trust managed by such bank;

- using in its sales activities of other collective investment securities information relating to the trust property of an investment trust managed by such bank;

- selling through other banks established under the Banking Act beneficiary certificates of an investment trust managed by such bank;

- establishing a short-term financial collective investment vehicle; and

- establishing a mutual fund.

Laws and Regulations Governing Other Business Activities

To enter the foreign exchange business, a bank must register with the Minister of the Ministry of Strategy and Finance. The foreign exchange business is governed by the Foreign Exchange Transaction Law. To enter the securities business, a bank must obtain the approval of the FSC. The securities business is governed by regulations under the FSCMA. Pursuant to the above-mentioned laws, banks are permitted to engage in the foreign exchange business and the underwriting business for government and other public bonds.

Recently, regulatory authorities are encouraging financial institutions to lower the ATM usage fees in order to decrease the financial expense burden on consumers. Further, in light of the increasing household debt, regulatory authorities are encouraging financial institutions to gradually increase the proportion of the principal of retail loans that are subject to the fixed interest rates from 14% in 2012 to 45% by 2017.

U.S. Banking Regulations

The Bank's operations in the United States are subject to a variety of regulatory regimes. The Bank maintains an uninsured branch in New York, which is licensed by the New York State Department of Financial Services ("**Department**") and registered with the banking authority of Korea. The Bank's New York branch is subject to regulation and examination by the Department under its licensing authority. In addition, the Federal Reserve Board exercises examination and regulatory authority over the Bank's U.S. branch. The Bank also owns a non-member state chartered bank, Shinhan Bank America, which is regulated by the Department, as its chartering authority, and by the Federal Deposit Insurance Corporation ("**FDIC**"), as its primary federal banking regulator and as the insurer of its deposits. The Bank's U.S. branch and U.S. bank subsidiary are subject to restrictions on their respective activities, as well as prudential restrictions, such as limits on extensions of credit to a single borrower, and restrictions on transactions with affiliates, among other things.

The Bank's U.S. Branch

The Department, as the licensing authority of the Bank's U.S. branch, has the authority, in certain circumstances, to take possession of the business and property of the Bank located in New York. Such circumstances generally include violations of law, unsafe business practices and insolvency. If the Department exercised this authority over the New York branch of the Bank, all assets of the Bank located in New York would generally be applied first to satisfy creditors of the New York branch. Any remaining assets would be applied to satisfy creditors of other U.S. offices of the Bank, after which any residual assets of the New York branch would be returned to the principal office of the Bank, and made available for application pursuant to any Korean insolvency proceeding.

In addition to the direct regulation of the Bank's U.S. branch by the Department and the Federal Reserve Board, because the Bank operates a U.S. branch and has a subsidiary bank in the U.S., the Bank's nonbanking activities in the United States are subject to regulation by the Federal Reserve Board pursuant to the International Banking Act of 1978, the Bank Holding Company Act of 1956 (the "**BHC Act**"), and other laws. Shinhan Financial Group has elected to be a "financial holding company" under the BHC Act. Financial holding companies may engage in a broader spectrum of activities than bank holding companies or foreign banking organizations that are not financial holding companies, including underwriting and dealing in securities. To maintain Shinhan Financial Group's financial holding company status, (i) the Bank and its U.S. subsidiary bank located in New York are required to be "well capitalized" and "well managed", (ii) the Bank's U.S. branch is required to meet certain examination ratings, and (iii) the Bank's subsidiary bank in New York is required to maintain a rating of at least "satisfactory" under the Community Reinvestment Act of 1977 (the "**CRA**").

A major focus of U.S. governmental policy relating to financial institutions in recent years has been aimed at fighting money laundering and terrorist financing. Regulations applicable to the Bank and its subsidiaries impose obligations to maintain effective policies, procedures and controls to detect, prevent and report money laundering and terrorist financing and to verify the identities of clients. Failure of a financial institution to maintain and implement adequate programs to combat money laundering and terrorist financing could have serious consequences for the firm, both in legal terms and in terms of the Bank's reputation.

The Dodd-Frank Wall Street Reform and Consumer Protection Act (the "**Dodd-Frank Act**"), which was enacted on July 21, 2010 in response to the financial crisis, impacts the financial services industry by addressing, among other issues, systemic risk oversight, bank capital standards, the liquidation of failing systemically important institutions, over-the-counter and cleared derivatives, the ability of banking entities, including non-U.S. banks with branches in the U.S., like the Bank, to engage in proprietary trading activities and invest in hedge funds and private equity (the so-called Volcker rule), consumer and investor protection, hedge fund registration, securitization, investment advisors, shareholder "say on pay," the role of credit-rating agencies, and more. The Dodd-Frank Act requires various federal banking and financial regulatory authorities to adopt a broad range of implementing rules and regulations. Such authorities have significant discretion in drafting the implementing rules and regulations.

The Dodd-Frank Act provides regulators with tools to impose greater capital, leverage and liquidity requirements and other prudential standards, particularly for financial institutions that pose significant systemic risk. Pursuant to the Dodd-Frank Act, the Federal Reserve Board has implemented rules that establish enhanced prudential standards for the U.S. operations of foreign banking organizations ("**FBOs**") such as us. In imposing such heightened prudential standards on non-U.S. banks such as the Bank, the Federal Reserve Board is directed to take into account the principle of national treatment and equality of competitive opportunity, and the extent to which the foreign bank holding company is subject to comparable home country standards.

On May 24, 2018, the Economic Growth, Regulatory Relief and Consumer Protection Act (the "**Reform Act**") was signed into law. Among other regulatory changes, the Reform Act amends various sections of the Dodd-Frank Act, including by raising the asset threshold for automatic application of enhanced prudential standards to FBOs under the Dodd-Frank Act from $50 billion in total global consolidated assets to $250 billion. The bill exempted FBOs with total global consolidated assets of less than $100 billion from these enhanced prudential standards effective immediately upon enactment of the bill. In October 2019, the Federal Reserve Board issued a final rule to implement the Reform Act's changes to the application of enhanced prudential standards with respect to U.S. bank holding companies and FBOs (the "**EPS Tailoring Rule**"). The EPS Tailoring Rule delineates three categories of enhanced prudential standards ("**EPS categories**") applicable to FBOs based on an FBO's asset size and other factors such as the degree of the cross-jurisdictional activity, reliance on short-term wholesale funding, nonbank assets, and off-balance sheet exposures of an FBO's U.S. operations. The EPS Tailoring Rule generally determines the stringency of enhanced prudential standards applicable to FBOs based on the risk profile of the FBO's U.S. operations, rather than its global footprint, with most enhanced prudential standards applying only to FBOs with combined U.S. assets of at least $100 billion. FBOs with global assets of $100 billion or more and a relatively limited U.S. presence, such as us, are subject to certain minimum standards under the EPS Tailoring Rule, with the Federal Reserve Board relying primarily on compliance with comparable home-country prudential standards with respect to such FBOs.

If the Bank's size or risk profile were to increase, the Bank's combined U.S. operations may be subject to certain further enhanced prudential standards. In particular, enhanced prudential standards applicable to FBOs require an FBO with both significant total global consolidated assets and significant U.S. assets (excluding the total assets of each U.S. branch and agency) to establish a U.S. top-tier intermediate holding company ("**IHC**") over all U.S. bank and nonbank subsidiaries, and generally subject such an FBO's IHC to the same capital adequacy standards, including minimum risk based capital and leverage requirements, liquidity, liquidity risk management, stress testing and single counterparty credit limits as those applicable to U.S. bank holding companies in the same EPS category under the EPS Tailoring Rule. In addition, certain enhanced prudential standards will apply to the combined U.S. operations of an FBO whether or not the FBO is required to establish a U.S. IHC. Rules imposing early remediation requirements on FBOs have yet to be finalized. The Bank continues to assess the full impact of these enhanced prudential requirements and the EPS Tailoring Rule on the Bank's business.

In addition, as an FBO with more than $100 billion in total consolidated assets, the Bank is currently required to submit annually to the Federal Reserve Board and FDIC a resolution plan for the orderly resolution of the Bank's U.S. operations under the U.S. Bankruptcy Code or other applicable insolvency laws in a rapid and orderly fashion in the event of future material financial distress or failure. If the Federal Reserve Board and the FDIC jointly determine that the resolution plan is not credible and the deficiencies are not cured in a timely manner, they may jointly impose more stringent capital, leverage or liquidity requirements or restrictions on the Bank's growth, activities or operations. If the Bank were to fail to address the deficiencies in the resolution plan when required, the Bank could eventually be required to divest certain assets or operations.

In October 2019, the Federal Reserve Board and FDIC issued a final rule addressing the applicability of resolution planning requirements for FBOs (the "**FBO Resolution Plan Rule**"). The FBO Resolution Plan Rule applies reduced resolution plan filing requirements to FBOs that have $250 billion or more in total global consolidated assets and that do not otherwise meet certain category thresholds identified in the EPS Tailoring Rule, such as us, requiring such FBOs to submit a reduced content resolution plan every three years.

In July 2019, U.S. federal regulatory agencies adopted amendments to the Volcker Rule regulations to implement the Volcker Rule amendments included in the Reform Act, and also in 2019 such U.S. federal regulatory agencies adopted certain targeted amendments to the Volcker Rule regulations to simplify and tailor certain compliance requirements relating to the Volcker Rule. In January 2020, U.S. federal regulatory agencies proposed additional revisions to the Volcker Rule's current restrictions on banking entities sponsoring and investing in certain covered hedge funds and private equity funds, including by proposing new exemptions allowing banking entities to sponsor and invest without limit in credit funds, venture capital funds, customer facilitation funds and family wealth management vehicles. The proposal would also loosen certain other restrictions on extraterritorial fund activities and direct parallel or co-investments made alongside covered funds. If adopted, the proposal would expand the ability of banking entities to invest in and sponsor private funds. However, the proposed revisions have not yet been adopted and are subject to change. The ultimate consequences of these regulatory developments on the Bank's activities remain uncertain.

Shinhan Bank America

Shinhan Bank America, a state chartered bank that is located in New York and is not a member of the Federal Reserve Board, is subject to extensive regulation and examination by the Department, as its chartering authority, and by the FDIC, as the insurer of its deposits and as its primary federal banking regulator. The federal and state laws and regulations which are applicable to banks regulate, among other things, the activities in which they may engage and the locations at which they may engage in them, their investments, their reserves against deposits, the timing of the availability of deposited funds and transactions with affiliates, among other things. Shinhan Bank America must file reports with the Department and the FDIC concerning its activities and financial condition, in addition to obtaining regulatory approvals prior to entering into certain transactions, such as establishing branches and mergers with, or acquisitions of, other depository institutions. The Department and the FDIC periodically examine the Bank to test Shinhan Bank America's safety and soundness and its compliance with various regulatory requirements. This comprehensive regulatory and supervisory framework restricts the activities in which a bank can engage and is intended primarily for the protection of the FDIC insurance fund and the bank's depositors. The regulatory structure also gives the regulatory authorities extensive discretion in connection with their supervisory and enforcement activities and examination policies, including policies with respect to the classification of assets and the establishment of adequate loan loss reserves. Any change in such regulations, whether by the Department, the FDIC or as a result of the enactment of legislation, could have a material adverse impact on Shinhan Bank America and its operations.

Capital Requirements. The FDIC imposes capital adequacy standards on state-chartered banks like Shinhan Bank America. The "prompt corrective action" framework under the Federal Deposit Insurance Corporation Improvement Act of 1991 ("**FDICIA**"), provides, among other things, for expanded regulation of insured depository institutions, including banks, and their parent holding companies. As required by FDICIA, the federal banking agencies have established five capital tiers ranging from "well capitalized" to "critically undercapitalized" for insured depository institutions. In order for the Bank's U.S. bank subsidiary to be classified as "well capitalized," which is necessary in order for the Bank to maintain its financial holding company status, it must maintain a minimum 5% Tier I leverage ratio, a 6.5% common equity Tier I capital ratio, a 8% Tier I risk-based capital ratio and a 10% total risk-based capital ratio.

In order for the Bank's U.S. bank subsidiary to be classified as "adequately capitalized" under FDICIA's prompt corrective action standards, which is necessary in order for the Bank's U.S. bank subsidiary to avoid certain restrictions under FDICIA, it must maintain a minimum 4% Tier I leverage ratio, a 4.5% common equity Tier I capital ratio, a 6% Tier I risk-based capital ratio and a 8% total risk-based capital ratio.

As of December 31, 2019, Shinhan Bank America exceeded all of the capital ratio standards for a well-capitalized bank with a Tier I leverage ratio of 13.28%, a common equity Tier I risk-based capital ratio of 17.61%, a Tier I risk-based capital ratio of 17.61% and a total risk-based capital ratio of 18.33%.

Activities and Investments of New York-Chartered Banks. Shinhan Bank America derives its lending, investment and other authority primarily from the applicable provisions of New York State Banking Law and the regulations of the Department, as well as FDIC regulations and other federal laws and regulations. See "— *Activities and Investments of FDIC-Insured State-Chartered Banks*" below. These New York laws and regulations authorize Shinhan Bank America to invest in real estate mortgages, consumer and commercial loans, certain types of debt securities, including certain corporate debt securities and obligations of federal, State and local governments and agencies, and certain other assets. A bank's aggregate lending powers are not subject to percentage of asset limitations, but, as discussed below, there are limits on the amount of credit exposure that a bank may have to a single borrower or group of related borrowers. A New York-chartered bank may also exercise trust powers upon approval of the Department. Shinhan Bank America does not have trust powers.

With certain limited exceptions, Shinhan Bank America may not make loans or extend credit for commercial, corporate or business purposes (including lease financing) to a single borrower, the aggregate amount of which would be in excess of 15% of Shinhan Bank America's net worth, on an unsecured basis, and 25% of the net worth if the excess is collateralized by readily marketable collateral or collateral otherwise having a value equal to the amount by which the loan exceeds 15% of Shinhan Bank America's net worth. In calculating the amount of outstanding loans or credit to a particular borrower for this purpose, Shinhan Bank America must include its credit exposure arising from derivative transactions with the borrower.

Activities and Investments of FDIC-Insured State-Chartered Banks. The activities and equity investments of FDIC-insured, state-chartered banks are generally limited to those that are permissible for national banks. Under regulations dealing with equity investments, an insured state bank generally may not directly or indirectly acquire or retain any equity investment of a type, or in an amount, that is not permissible for a national bank. An insured state bank may, among other things, (i) acquire or retain a majority interest in a subsidiary that is engaged in activities that are permissible for the bank itself to engage in, (ii) invest as a limited partner in a partnership the sole purpose of which is direct or indirect investment in the acquisition, rehabilitation or new construction of a qualified housing project, provided that such limited partnership investments may not exceed 2% of the bank's total assets, and (iii) acquire up to 10% of the voting stock of a company that solely provides or reinsures directors', trustees' and officers' liability insurance coverage or bankers' blanket bond group insurance coverage for insured depository institutions. In addition, an FDIC-insured state-chartered bank may not directly, or indirectly through a subsidiary, engage as "principal" in any activity that is not permissible for a national bank unless the FDIC has determined that such activities would pose no risk to the insurance fund of which it is a member and the bank is in compliance with applicable regulatory capital requirements.

Regulatory Enforcement Authority. Applicable banking laws include substantial enforcement powers available to federal banking regulators. This enforcement authority includes, among other things, the ability to assess civil money penalties, to issue cease-and-desist or removal orders and to initiate injunctive actions against banking organizations and institution-affiliated parties, as defined. In general, these enforcement actions may be initiated for violations of laws and regulations and unsafe or unsound practices. Other actions or inactions may provide the basis for enforcement action, including misleading or untimely reports filed with regulatory authorities. On June 12, 2017, Shinhan Bank America entered into a consent order with the FDIC with respect to certain weaknesses relating to its anti-money laundering compliance program. Shinhan Bank America has taken corrective measures and provides periodic reports to the FDIC with regard to such matters.

Under the New York State Banking Law, the Department may issue an order to a New York-chartered banking institution to appear and explain an apparent violation of law, to discontinue unauthorized or unsafe practices and to keep prescribed books and accounts. Upon a finding by the Department that any director, trustee or officer of any banking organization has violated any law, or has continued unauthorized or unsafe practices in conducting the business of the banking organization after having been notified by the Department to discontinue such practices, such director, trustee or officer may be removed from office by the Department after notice and an opportunity to be heard. The Department also may take possession of a banking organization under specified statutory criteria.

Prompt Corrective Action. Section 38 of the Federal Deposit Insurance Act ("**FDIA**") provides the federal banking regulators with broad power to take "prompt corrective action" to resolve the problems of undercapitalized institutions. The extent of the regulators' powers depends on whether the institution in question is "well capitalized," "adequately capitalized," "undercapitalized," "significantly undercapitalized" or "critically undercapitalized." A bank is deemed to be (i) "well capitalized" if it has total risk-based capital ratio of 10.0% or greater, has a Tier I risk-based capital ratio of 8.0% or greater, has a common equity Tier I capital ratio of 6.5% or greater, has a Tier I leverage capital ratio of 5.0% or greater, and is not subject to specified requirements to meet and maintain a specific capital level for any capital measure, (ii) "adequately capitalized" if it has a total risk-based capital ratio of 8.0% or greater, has a Tier I risk-based capital ratio of 6.0% or greater, has a common equity Tier I capital ratio of 4.5% or greater, has a Tier I leverage capital ratio of 4.0% or greater and does not meet the definition of "well capitalized," (iii) "undercapitalized" if it has a total risk-based capital ratio that is less than 8.0%, has a Tier I risk-based capital ratio that is less than 6.0%, has a common equity Tier I capital ratio of less than 4.5%, or has a Tier I leverage capital ratio that is less than 4.0%, (iv) "significantly undercapitalized" if it has a total risk-based capital ratio that is less than 6.0%, has a Tier I risk-based capital ratio that is less than 4.0%, has a common equity Tier I capital ratio that is less than 3.0%, or has or a Tier I leverage capital ratio that is less than 3.0%, and (v) "critically undercapitalized" if it has a ratio of tangible equity to total assets that is equal to or less than 2.0%. The regulations also provide that a federal banking regulator may, after notice and an opportunity for a hearing, reclassify a "well capitalized" institution as "adequately capitalized" and may require an "adequately capitalized" institution or an "undercapitalized" institution to comply with supervisory actions as if it were in the next lower category if the institution is in an unsafe or unsound condition or engaging in an unsafe or unsound practice. The federal banking regulator may not, however, reclassify a "significantly undercapitalized" institution as "critically undercapitalized."

An institution generally must file a written capital restoration plan which meets specified requirements, as well as a performance guaranty by each company that controls the institution, with an appropriate federal banking regulator within 45 days of the date that the institution receives notice or is deemed to have notice that it is "undercapitalized," "significantly undercapitalized" or "critically undercapitalized." Immediately upon becoming undercapitalized, an institution becomes subject to statutory provisions, which, among other things, set forth various mandatory and discretionary restrictions on the operations of such an institution.

FDIC Insurance. Shinhan Bank America's deposits are insured by the FDIC. As insurer, the FDIC is authorized to conduct examinations of, and to require reporting by, FDIC-insured institutions. It also may prohibit any FDIC-insured institution from engaging in any activity the FDIC determines by regulation or order to pose a serious threat to the FDIC.

During the 2008-2009 financial crisis, there were many failures and near-failures among financial institutions. The FDIC insurance fund reserve ratio, representing the ratio of the fund to the level of insured deposits, declined due to losses caused by bank failures and the FDIC then increased its deposit insurance premiums on remaining institutions in order to replenish the insurance fund. The FDIC insurance fund balance increased throughout 2010 and turned positive in 2011. The Dodd-Frank Act requires the FDIC to increase the ratio of the FDIC insurance fund to estimated total insured deposits ("**Reserve Ratio**") to 1.35% by September 30, 2020. If bank failures in the future are more costly than the FDIC currently anticipates, then the FDIC may be required to continue to impose higher insurance premiums. Any such increase would increase the Bank's non-interest expense. Thus, despite the prudent steps Shinhan Bank America may take to avoid the mistakes made by other banks, its costs of operations may increase as a result of those mistakes by others.

As required by the Dodd-Frank Act, the FDIC revised its deposit insurance premium assessment rates in 2011. In 2016, the FDIC adopted a rule in accordance with provisions of the Dodd-Frank Act that requires large institutions to bear the burden of raising the Reserve Ratio from 1.15% to 1.35% through assessment surcharges for such large institutions. The Reserve Ratio exceeded 1.35% in September 2018.

As a result of the Dodd-Frank Act, the increase in the standard FDIC insurance limit from US$100,000 to US$250,000 was made permanent. The Dodd-Frank Act also removed the prohibition on banks paying interest on demand deposits.

The FDIC may terminate the deposit insurance of any insured depository institution, including Shinhan Bank America, if it determines, after a hearing, that the institution has engaged or is engaging in unsafe or unsound practices, is in an unsafe or unsound condition to continue operations, or has violated any applicable law, regulation, order or any condition imposed by an agreement with the FDIC. It also may suspend deposit insurance temporarily during the hearing process for the permanent termination of insurance, if the institution has no tangible capital. If insurance of accounts is terminated, the accounts at the institution at the time of the termination, less subsequent withdrawals, shall continue to be insured for a period of six months to two years, as determined by the FDIC. Management is aware of no existing circumstances that would result in termination of Shinhan Bank America's deposit insurance.

Brokered Deposits. Under federal law and applicable regulations, (i) a well-capitalized bank may solicit and accept, renew or roll over any brokered deposit without restriction, (ii) an adequately capitalized bank may not accept, renew or roll over any brokered deposit unless it has applied for and been granted a waiver of this prohibition by the FDIC and (iii) an undercapitalized bank may not (x) accept, renew or roll over any brokered deposit or (y) solicit deposits by offering an effective yield that exceeds by more than 75 basis points the prevailing effective yields on insured deposits of comparable maturity in such institution's normal market area or in the market area in which such deposits are being solicited. The term "undercapitalized insured depository institution" is defined to mean any insured depository institution that fails to meet the minimum regulatory capital requirement prescribed by its appropriate federal banking agency. The FDIC may, on a case-by-case basis and upon application by an adequately capitalized insured depository institution, waive the restriction on brokered deposits upon a finding that the acceptance of brokered deposits does not constitute an unsafe or unsound practice with respect to such institution. In August 2019 and December 2019, the FDIC issued proposed rules on aspects of FDIC's brokered deposit and interest rate regulations. The outcome of these proposed rules on the FDIC's regulations in the future is uncertain. Shinhan Bank America had an aggregate amount of US$35.6 million of brokered deposits outstanding as of December 31, 2019.

Community Reinvestment and Consumer Protection Laws. In connection with its lending activities, Shinhan Bank America is subject to a variety of federal laws designed to protect borrowers and promote lending to various sectors of the economy and population. Included among these are the Home Mortgage Disclosure Act, Real Estate Settlement Procedures Act, Truth-in-Lending Act, Equal Credit Opportunity Act, Fair Credit Reporting Act and CRA.

The CRA requires FDIC insured banks to define the assessment areas that they serve, identify the credit needs of those assessment areas and take actions that respond to the credit needs of the community. The FDIC must conduct regular CRA examinations of Shinhan Bank America and assign it a CRA rating of "outstanding," "satisfactory," "needs improvement" or "unsatisfactory." Shinhan Bank America is also subject to provisions of the New York State Banking Law which impose similar obligations to serve the credit needs of its assessment areas. The Department and the FDIC each periodically assess a bank's compliance, and makes the assessment available to the public. Federal and New York State laws both require consideration of these ratings when reviewing a bank's application to engage in certain transactions, including mergers, asset purchases and the establishment of branch offices. A negative assessment may serve as a basis for the denial of any such application. Shinhan Bank America has received "satisfactory" ratings from both the Department and the FDIC in its most recent CRA performance evaluation.

In December 2019, the FDIC and the Office of the Comptroller of the Currency ("**OCC**") proposed comprehensive amendments to the CRA, which would significantly affect the manner in which banks seek to satisfy their CRA obligations (including by modifying incentives for banks to lend to, invest in, and provide services to their communities generally, and in low- and moderate-income ("**LMI**") areas, in particular) and modify the CRA examination process for all but the smallest banks by moving from the current subjective rating system to a "metric-based" rating system. It remains unclear whether the FDIC, OCC or other regulatory agencies will adopt final rules amending the CRA and, if such rules were to be adopted, we cannot predict at this time the extent to which the scope of such final rules would resemble the CRA amendments proposed in December 2019. It also remains unclear whether any other particular legislative or regulatory proposals will be enacted or adopted concerning CRA requirements applicable to us. To the extent any such final amendments to CRA requirements applicable to us are adopted, such regulatory developments may impact the ability of Shinhan Bank America to achieve "satisfactory" CRA performance ratings.

The Dodd-Frank Act created the Consumer Financial Protection Bureau ("**Bureau**") with broad authority to regulate and enforce consumer protection laws. The Bureau has the authority to adopt regulations under numerous existing federal consumer protection statutes. The Bureau may also decide that a particular consumer financial product or service, or the manner in which it is offered, is an unfair, deceptive, or abusive act or practice. If the Bureau so decides, it has the authority to outlaw such act or practice.

Limitations on Dividends. The payment of dividends by Shinhan Bank America is subject to various regulatory requirements. Under New York State Banking Law, a New York-chartered stock bank may declare and pay dividends out of its net profits, unless there is an impairment of capital, but approval of the Superintendent of Banks is required if the total of all dividends declared in a calendar year would exceed the total of its net profits for that year combined with its retained net profits of the preceding two years, subject to certain adjustments.

Assessments. Banking institutions are required to pay assessments to both the FDIC and the Department to fund the operations of those agencies. The assessments are based upon the amount of Shinhan Bank America's total assets. Shinhan Bank America must also pay an examination fee to the Department when it conducts an examination.

Transactions with Related Parties. Shinhan Bank America's authority to engage in transactions with related parties or "affiliates" (i.e., any entity that controls or is under common control with an institution) is limited by Sections 23A and 23B of the Federal Reserve Act. Section 23A limits the aggregate amount of transactions with any individual affiliate to 10% of the capital and surplus of the institution and also limits the aggregate amount of transactions with all affiliates to 20% of the institution's capital and surplus. The term "affiliate" includes, for this purpose, the Bank and any company that it controls other than Shinhan Bank America and its subsidiaries.

Loans to affiliates must be secured by collateral with a value that depends on the nature of the collateral. The purchase of low quality assets from affiliates is generally prohibited. Loans and asset purchases with affiliates must be on terms and under circumstances, including credit standards, that are substantially the same or at least as favorable to the institution as those prevailing at the time for comparable transactions with nonaffiliated companies. In the absence of comparable transactions, such transactions may only occur under terms and circumstances, including credit standards that in good faith would be offered to or would apply to nonaffiliated companies. Shinhan Bank America's authority to extend credit to executive officers, directors and 10% shareholders, as well as entities controlled by such persons, is governed by Regulation O of the Federal Reserve Board. Regulation O generally requires such loans to be made on terms substantially similar to those offered to unaffiliated individuals (except for preferential loans made in accordance with broad based employee benefit plans), places limits on the amount of loans Shinhan Bank America may make to such persons based, in part, on Shinhan Bank America's capital position, and requires certain approval procedures to be followed.

Standards for Safety and Soundness. FDIC regulations require that Shinhan Bank America adopt procedures and systems designed to foster safe and sound operations in the areas of internal controls, information systems, internal and audit systems, loan documentation, credit underwriting, interest rate risk exposure, asset growth, asset quality, earnings and compensation, fees and benefits. Among other things, these regulations prohibit compensation and benefits and arrangements that are excessive or that could lead to a material financial loss. If Shinhan Bank America fails to meet any of these standards, it will be required to submit to the FDIC a plan specifying the steps that will be taken to cure the deficiency. If it fails to submit an acceptable plan or fails to implement the plan, the FDIC will require it to correct the deficiency and until corrected, may impose restrictions on it.

The FDIC has also adopted regulations that require Shinhan Bank America to adopt written loan policies and procedures that are consistent with safe and sound operation, are appropriate for its size, and must be reviewed by its Board of Directors annually. Shinhan Bank America has adopted such policies and procedures, the material provisions of which are discussed above as part of the discussion of the Bank's lending operations.

TAXATION

United States Federal Income Taxation

The following discussion is a summary of certain United States federal income tax consequences of the purchase, ownership and disposition of Notes as of the date hereof.

The discussion set forth below is applicable to United States Holders (as defined below) (i) who are residents of the United States for purposes of the current income tax treaty between the United States and Korea (the "**Treaty**"); (ii) whose Notes are not, for purposes of the Treaty, attributable to a permanent establishment in Korea; and (iii) who otherwise qualify for the full benefits of the Treaty.

Except where noted, this summary deals only with United States Holders that hold Notes as capital assets. Furthermore, this summary does not represent a detailed description of the United States federal income tax consequences applicable to you if you are subject to special treatment under the United States federal income tax laws, including if you are:

- a dealer in securities or currencies;
- a financial institution;
- a regulated investment company;
- a real estate investment trust;
- a tax-exempt organization;
- an insurance company;
- a person holding the Notes as part of a hedging, integrated, conversion or constructive sale transaction or a straddle;
- a trader in securities that has elected the mark-to-market method of accounting for your securities;
- a person liable for alternative minimum tax;
- a partnership or other pass-through entity for United States federal income tax purposes;
- a person whose "functional currency" is not the U.S. dollar;
- a person required to accelerate the recognition of any item of gross income with respect to the Notes as a result of such income being recognized on an applicable financial statement; or
- a United States expatriate.

As used herein, a "**United States Holder**" means a beneficial owner of a Note that is for United States federal income tax purposes:

- an individual citizen or resident of the United States;
- a corporation (or any other entity treated as a corporation for United States federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate the income of which is subject to United States federal income taxation regardless of its source; or
- a trust if it (1) is subject to the primary supervision of a court within the United States and one or more United States persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable United States Treasury regulations to be treated as a United States person.

This summary is based upon provisions of the Code, and final, temporary and proposed regulations, rulings and judicial decisions as of the date hereof. Those authorities may be changed, perhaps retroactively, so as to result in United States federal income tax consequences different from those summarized below.

This summary does not discuss Subordinated Notes, Notes with a maturity of greater than 30 years, the impact of a redenomination of a Note, Notes that by their terms may be retired for an amount less than their principal amount and Notes subject to special rules. The tax treatment of certain Notes may be specified, and the tax treatment of any Subordinated Notes will be specified, in the applicable Pricing Supplement. In general, United States federal income tax law imposes significant limitations on United States Holders of Bearer Notes. United States Holders should consult their tax advisors regarding the restrictions and penalties imposed under United States federal income tax law with respect to Bearer Notes and any other tax consequences with respect to the acquisition, ownership and disposition of any of these Notes.

The discussion below assumes that all Notes issued pursuant to this offering circular will be classified for United States federal income tax purposes as the Bank's indebtedness and you should note that in the event of an alternative characterization, the tax consequences would differ, possibly materially, from those discussed below. The Bank will summarize any special United States federal tax considerations relevant to a particular issue of the Notes in the applicable Pricing Supplement.

In addition, the following discussion assumes that the Bank will not be acting through a branch other than its office in Korea. If the Bank acts through a branch in the United States with respect to a particular issuance of Notes, the United States federal income tax consequences of holding such Notes will be discussed in the applicable Pricing Supplement.

If a partnership (or other pass-through entity for United States federal income tax purposes) holds Notes, the tax treatment of a partner in the partnership (or an owner of an interest in the pass-through entity) will generally depend upon the status of the partner (or owner) and the activities of the partnership (or other pass-through entity). If you are a partner in a partnership (or an owner of an interest in any other pass-through entity) holding Notes, you should consult your tax advisors.

This summary does not represent a detailed description of the United States federal income tax consequences to you in light of your particular circumstances and does not address the Medicare contribution tax on net investment income or the effects of any state, local or non-United States tax laws. **If you are considering the purchase of Notes, you should consult your own tax advisors concerning the particular United States federal income tax consequences to you of the purchase, ownership and disposition of the Notes, as well as the consequences to you arising under other United States federal tax laws and the laws of any other taxing jurisdiction.**

Payments of Interest

Except as set forth below, interest on a Note will generally be taxable to you as ordinary income at the time it is paid or accrued in accordance with your method of accounting for United States federal income tax purposes.

In addition to interest on the Notes (which includes any Korean tax withheld from the interest payments you receive), you will be required to include in income any additional amounts paid in respect of such Korean tax withheld. You may be entitled to deduct or credit this tax, subject to certain limitations (including that the election to deduct or credit foreign taxes applies to all of your foreign taxes for a particular tax year). Korean taxes withheld in excess of the rate allowed by the Treaty will not be eligible for credit against your United States federal income tax liability. Interest income (including any additional amounts) on a Note generally will be considered foreign source income and, for purposes of the United States foreign tax credit, generally will be considered "passive category income." You will generally be denied a foreign tax credit for foreign taxes imposed with respect to the Notes where you do not meet a minimum holding period requirement during which you are not protected from risk of loss. The rules governing the foreign tax credit are complex. You are urged to consult your tax advisors regarding the availability of the foreign tax credit under your particular circumstances.

Original Issue Discount

If you own Notes issued with original issue discount ("**OID**", and such Notes, **"original issue discount Notes"**), you will be subject to special tax accounting rules, as described in greater detail below. In that case, you should be aware that you generally must include OID in gross income as interest in advance of the receipt of cash attributable to that income. However, you generally will not be required to include separately in income cash payments received on the Notes, even if denominated as interest, to the extent those payments do not constitute "qualified stated interest," as defined below. Notice will be given in the applicable Pricing Supplement when the Bank determines that a particular Note will be issued with OID.

Additional rules applicable to Notes that are denominated in or determined by reference to a currency other than the U.S. dollar ("**foreign currency Notes**") and that are issued with OID are described under "*—Foreign Currency Notes*" below.

A Note with an "issue price" that is less than its stated redemption price at maturity (the sum of all payments to be made on the Note other than "qualified stated interest") generally will be issued with OID if that difference is at least 0.25% of the stated redemption price at maturity multiplied by the number of complete years to maturity (or, in the case of an Installment Note, the weighted average maturity). The "**issue price**" of each Note in a particular offering will be the first price at which a substantial amount of that particular offering is sold to the public for money. The term "**qualified stated interest**" means stated interest that is unconditionally payable in cash or in property, other than debt instruments of the Bank, and meets all of the following conditions:

- it is payable at least once per year;

- it is payable over the entire term of the Note; and

- it is payable at a single fixed rate or, subject to certain conditions, based on one or more interest indices.

The Bank will give you notice in the applicable Pricing Supplement when it determines that a particular Note will bear interest that is not qualified stated interest.

If you own a Note issued with de minimis OID, which is discount that is not OID because it is less than 0.25% of the stated redemption price at maturity multiplied by the number of complete years to maturity (or, in the case of an Installment Note, the weighted average maturity), you generally must include the de minimis OID in income at the time principal payments on the Notes are made in proportion to the amount paid. Any amount of de minimis OID that you have included in income will be treated as capital gain.

Certain of the Notes may contain provisions permitting them to be redeemed prior to their stated maturity date at the Bank's option and/or at your option. Original issue discount Notes containing those features may be subject to rules that differ from the general rules discussed herein. If you are considering the purchase of original issue discount Notes with those features, you should carefully examine the applicable Pricing Supplement and should consult your own tax advisors with respect to those features since the tax consequences to you with respect to OID will depend, in part, on the particular terms and features of the Notes.

If you own original issue discount Notes with a maturity upon issuance of more than one year, you generally must include OID in income (as ordinary income) in advance of the receipt of some or all of the related cash payments using the "constant yield method" described in the following paragraphs.

The amount of OID that you must include in income if you are the initial holder of an original issue discount Note is the sum of the "daily portions" of OID with respect to the Note for each day during the taxable year or portion of the taxable year in which you held that Note ("**accrued OID**"). The daily portion is determined by allocating to each day in any "accrual period" a pro rata portion of the OID allocable to that accrual period. The "accrual period" for an original issue discount Note may be of any length and may vary in length over the term of the Note, *provided that* each accrual period is no longer than one year and each scheduled payment of principal or interest occurs on the first day or the final day of an accrual period. The amount of OID allocable to any accrual period other than the final accrual period is an amount equal to the excess, if any, of:

- the Note's "adjusted issue price" at the beginning of the accrual period multiplied by its yield to maturity, determined on the basis of compounding at the close of each accrual period and properly adjusted for the length of the accrual period, over

- the aggregate of all qualified stated interest allocable to the accrual period.

OID allocable to a final accrual period is the difference between the amount payable at maturity, other than a payment of qualified stated interest, and the adjusted issue price at the beginning of the final accrual period. Special rules will apply for calculating OID for an initial short accrual period. The **"adjusted issue price"** of a Note at the beginning of any accrual period is equal to its issue price increased by the accrued OID for each prior accrual period, determined without regard to the amortization of any acquisition or bond premium, as described below, and reduced by any payments previously made on the Note other than qualified stated interest. Under these rules, you will have to include in income increasingly greater amounts of OID in successive accrual periods.

Floating Rate Notes are subject to special OID rules. In the case of an original issue discount Note that is a Floating Rate Note, both the "yield to maturity" and "qualified stated interest" will be determined solely for purposes of calculating the accrual of OID as though the Note will bear interest in all periods at a fixed rate generally equal to the rate that would be applicable to interest payments on the Note on its date of issue or, in the case of certain Floating Rate Notes, the rate that reflects the yield to maturity that is reasonably expected for the Note. Additional rules may apply if either:

- the interest on a Floating Rate Note is based on more than one interest index; or

- the principal amount of the Note is indexed in any manner.

The discussion above generally does not address Notes providing for contingent payments. You should carefully examine the applicable Pricing Supplement regarding the United States federal income tax consequences of the holding and disposition of any Notes providing for contingent payments.
You may elect to treat all interest on any Note as OID and calculate the amount includible in gross income under the constant yield method described above. For purposes of this election, interest includes stated interest, acquisition discount, OID, de minimis OID, market discount, de minimis market discount and unstated interest, as adjusted by any amortizable bond premium or acquisition premium. You should consult with your own tax advisors about this election.

Korean withholding taxes may be imposed at times that differ from the times at which you are required to include interest or OID in income for United States federal income tax purposes and this disparity may limit the amount of foreign tax credit available.

Short-Term Notes

In the case of Notes having a term of one year or less (**"short-term Notes"**), all payments, including all stated interest, will be included in the stated redemption price at maturity and will not be qualified stated interest. As a result, you will generally be taxed on the discount instead of stated interest. The discount will be equal to the excess of the stated redemption price at maturity over the issue price of a short-term Note, unless you elect to compute this discount using tax basis instead of issue price. In general, individuals and certain other cash method United States Holders of short-term Notes are not required to include accrued discount in their income currently unless they elect to do so, but may be required to include stated interest in income as the income is received. United States Holders that report income for United States federal income tax purposes on the accrual method and certain other United States Holders are required to accrue discount on short-term Notes (as ordinary income) on a straight-line basis, unless an election is made to accrue the discount according to a constant yield method based on daily compounding. If you are not required, and do not elect, to include discount in income currently, any gain you realize on the sale, exchange, redemption, retirement or other disposition of a short-term Note will generally be ordinary income to you to the extent of the discount accrued by you through the date of sale, exchange, redemption, retirement or other disposition. In addition, if you do not elect to currently include accrued discount in income you may be required to defer deductions for a portion of your interest expense with respect to any indebtedness attributable to the short-term Notes.

Market Discount

If you purchase a Note for an amount that is less than its stated redemption price at maturity (or, in the case of an original issue discount Note, its adjusted issue price), the amount of the difference will be treated as "market discount" for United States federal income tax purposes, unless that difference is less than a specified de minimis amount. Under the market discount rules, you will be required to treat any principal payment on, or any gain on the sale, exchange, retirement or other disposition of, a Note as ordinary income to the extent of the market discount that you have not previously included in income and are treated as having accrued on the Note at the time of the payment or disposition.

In addition, you may be required to defer, until the maturity of the Note or its earlier disposition in a taxable transaction, the deduction of all or a portion of the interest expense on any indebtedness attributable to the Note. You may elect, on a Note-by-Note basis, to deduct the deferred interest expense in a tax year prior to the year of disposition. You should consult your own tax advisors before making this election.

Any market discount will be considered to accrue ratably during the period from the date of acquisition to the maturity date of the Note, unless you elect to accrue on a constant interest method. You may elect to include market discount in income currently as it accrues, on either a ratable or constant interest method, in which case the rule described above regarding deferral of interest deductions will not apply. This election will apply to all debt instruments with market discount you acquire on or after the first day of the first taxable year for which the election is made. This election may not be revoked without the consent of the Internal Revenue Service (the "**IRS**").

Acquisition Premium, Amortizable Bond Premium

If you purchase an original issue discount Note for an amount that is greater than its adjusted issue price but equal to or less than the sum of all amounts payable on the Note after the purchase date other than payments of qualified stated interest, you will be considered to have purchased that Note at an "acquisition premium." Under the acquisition premium rules, the amount of OID that you must include in gross income with respect to the Note for any taxable year will be reduced by the portion of the acquisition premium properly allocable to that year.

If you purchase a Note (including an original issue discount Note) for an amount in excess of the sum of all amounts payable on the Note after the purchase date other than qualified stated interest, you will be considered to have purchased the Note at a "premium" and, if it is an original issue discount Note, you will not be required to include any OID in income. You generally may elect to amortize the premium over the remaining term of the Note on a constant yield method as an offset to interest when includible in income under your regular accounting method. Special rules limit the amortization of premium in the case of convertible debt instruments. In addition, if the Note has an optional redemption feature, special rules will apply that may reduce, eliminate or defer the amount of bond premium that you may amortize. If you do not elect to amortize bond premium, that premium will decrease the gain or increase the loss you would otherwise recognize on disposition of the Note. Any election to amortize the premium will apply to all notes (other than notes the interest on which is excludible from gross income for United States federal income tax purposes) held by you at the beginning of the first taxable year to which the election applies or thereafter acquired, and is irrevocable without the consent of the IRS.

Sale, Exchange, Redemption, Retirement and Other Disposition of Notes

Your adjusted tax basis in a Note will, in general, be your cost for that Note, increased by OID, market discount or any discount with respect to a short-term Note that you previously included in income, and reduced by any amortized premium and any cash payments on the Note other than qualified stated interest. Upon the sale, exchange, redemption, retirement or other disposition of a Note, you will recognize gain or loss equal to the difference between the amount you realize upon the sale, exchange, redemption, retirement or other disposition (less an amount equal to any accrued and unpaid qualified stated interest, which will be taxable as interest income to the extent not previously included in income) and your adjusted tax basis in the Note. Except as described above with respect to certain short-term Notes or with respect to market discount, with respect to gain or loss attributable to changes in exchange rates as discussed below with respect to foreign currency Notes and with respect to contingent payment debt instruments which this summary generally does not discuss, that gain or loss will be capital gain or loss and will be long-term capital gain or loss if you have held the Note for more than one year. Long-term capital gains of non-corporate United States Holders (including individuals) are eligible for reduced rates of taxation. The deductibility of capital losses is subject to limitations. Gain or loss realized by you on the sale, exchange, redemption, retirement or other disposition of a Note will generally be treated as United States source gain or loss. Consequently, you may not be able to claim a credit for any Korean tax imposed upon a disposition of a Note unless such credit can be applied (subject to applicable limitations) against tax due on other income treated as derived from foreign sources.

Foreign Currency Notes

Payments of Interest. If you receive interest payments made in a currency other than the U.S. dollar (a "**foreign currency**") and you use the cash basis method of accounting for United States federal income tax purposes, you will be required to include in income the U.S. dollar value of the amount received, determined by translating the foreign currency received at the spot rate for such foreign currency on the date such payment is received regardless of whether the payment is in fact converted into U.S. dollars. You will not recognize exchange gain or loss with respect to the receipt of such payment.

If you use the accrual method of accounting for United States federal income tax purposes, you may determine the amount of income recognized with respect to such interest in accordance with either of two methods. Under the first method, you will be required to include in income for each taxable year the U.S. dollar value of the interest that has accrued during such year, determined by translating such interest at the average rate of exchange for the period or periods (or portions thereof) during which such interest accrued. Under the second method, you may elect to translate interest income at the spot rate on:

- the last day of the accrual period,
- the last day of the taxable year if the accrual period straddles your taxable year, or
- the date the interest payment is received if such date is within five business days of the end of the accrual period.

Any election made under the second method will apply to all debt instruments held by you at the beginning of the first taxable year to which the election applies or thereafter acquired, and will be irrevocable without the consent of the IRS.

If you use the accrual method of accounting, upon receipt of an interest payment on a Note (including, upon the sale of a Note, the receipt of proceeds which include amounts attributable to accrued interest previously included in income), you will recognize exchange gain or loss in an amount equal to the difference between the U.S. dollar value of such payment (determined by translating the foreign currency received at the spot rate for such foreign currency on the date such payment is received) and the U.S. dollar value of the interest income you previously included in income with respect to such payment. Any such exchange gain or loss will generally be treated as United States source ordinary income or loss.

Original Issue Discount. OID on a Note that is also a foreign currency Note will be determined for any accrual period in the applicable foreign currency and then translated into U.S. dollars, in the same manner as interest income accrued by a holder on the accrual basis, as described above. You will recognize exchange gain or loss, which is generally United States source ordinary income or loss, when OID is paid (including, upon the sale of a Note, the receipt of proceeds that include amounts attributable to OID previously included in income) to the extent of the difference between the U.S. dollar value of such payment (determined by translating the foreign currency received at the spot rate for such foreign currency on the date such payment is received) and the U.S. dollar value of the accrued OID (determined in the same manner as for accrued interest). For these purposes, all receipts on a Note will be viewed:

- first, as the receipt of any stated interest payments called for under the terms of the Note,

- second, as receipts of previously accrued OID (to the extent thereof), with payments considered made for the earliest accrual periods first, and

- third, as the receipt of principal.

Market Discount and Bond Premium. The amount of market discount includible in income with respect to a foreign currency Note will generally be determined by translating the market discount determined in the foreign currency into U.S. dollars at the spot rate on the date the foreign currency Note is retired or otherwise disposed of. If you have elected to accrue market discount currently, then the amount which accrues is determined in the foreign currency and then translated into U.S. dollars on the basis of the average exchange rate in effect during such accrual period. You will recognize exchange gain or loss, which is generally United States source ordinary income or loss, with respect to market discount which is accrued currently using the approach applicable to the accrual of interest income as described above.

Bond premium on a foreign currency Note will be computed in the applicable foreign currency. If you have elected to amortize the premium, the amortizable bond premium will reduce interest income in the applicable foreign currency. At the time bond premium is amortized, exchange gain or loss will be realized based on the difference between spot rates at such time and the time of acquisition of the foreign currency Note.

If you elect not to amortize bond premium, you must translate the bond premium computed in the foreign currency into U.S. dollars at the spot rate on the maturity date and such bond premium will constitute a capital loss which may be offset or eliminated by exchange gain.

Sale, Exchange, Redemption, Retirement and Other Disposition of Foreign Currency Notes. Upon the sale, exchange, redemption, retirement or other disposition of a foreign currency Note, you will recognize gain or loss equal to the difference between the amount realized upon the sale, exchange, redemption, retirement or other disposition (less an amount equal to any accrued and unpaid qualified stated interest, which will be taxed as interest for United States federal income tax purposes to the extent not previously included in income) and your adjusted tax basis in the foreign currency Note. Your initial tax basis in a foreign currency Note generally will be your U.S. dollar cost. If you purchased a foreign currency Note with foreign currency, your cost generally will be the U.S. dollar value of the foreign currency amount paid for such foreign currency Note determined at the time of such purchase. If your foreign currency Note is sold, exchanged, redeemed, retired, or otherwise disposed of for an amount denominated in foreign currency, then your amount realized generally will be based on the spot rate of the foreign currency on the date of sale, exchange, redemption, retirement, or other disposition. If you are a cash method taxpayer and the foreign currency Notes are traded on an established securities market, foreign currency paid or received is translated into U.S. dollars at the spot rate on the settlement date of the purchase or sale. An accrual method taxpayer may elect the same treatment with respect to the purchase and sale of foreign currency Notes traded on an established securities market, *provided that* the election is applied consistently.

Except as described above with respect to "Short-Term Notes" and "Market Discount," and subject to the foreign currency rules discussed below, such gain or loss will be capital gain or loss and will be long-term capital gain or loss if at the time of sale, exchange, redemption, retirement or other disposition, the foreign currency Note has been held for more than one year. Long-term capital gains of non-corporate United States Holders (including individuals) are eligible for reduced rates of taxation. The deductibility of capital losses is subject to limitations. Gain or loss realized by you on the sale, exchange, redemption, retirement, or other disposition of a foreign currency Note will generally be treated as United States source gain or loss. Consequently, you may not be able to claim a credit for any Korean tax imposed upon a disposition of a foreign currency Note unless such credit can be applied (subject to applicable limitations) against tax due on other income treated as derived from foreign sources.

A portion of your gain or loss with respect to the principal amount of a foreign currency Note may be treated as exchange gain or loss. Exchange gain or loss will generally be treated as United States source ordinary income or loss. For these purposes, the principal amount of the foreign currency Note is your purchase price for the foreign currency Note calculated in the foreign currency on the date of purchase, and the amount of exchange gain or loss recognized is equal to the difference between (i) the U.S. dollar value of the principal amount determined on the date of the sale, exchange, redemption, retirement or other disposition of the foreign currency Note and (ii) the U.S. dollar value of the principal amount determined on the date you purchased the foreign currency Note (or, in each case, on the settlement date of such disposition or purchase, if the foreign currency Note is traded on an established securities market and you are a cash basis or electing accrual basis taxpayer, as described above). The amount of exchange gain or loss will be limited to the amount of overall gain or loss realized on the disposition of the foreign currency Note.

Exchange Gain or Loss with Respect to Foreign Currency. Your tax basis in the foreign currency received as interest on a foreign currency Note or on the sale, exchange, redemption, retirement, or other disposition of a foreign currency Note will be equal to the U.S. dollar value of the foreign currency, determined at the time the foreign currency is received. Any gain or loss recognized by you on a sale, exchange or other disposition of the foreign currency will be ordinary income or loss and generally will be United States source gain or loss.

Dual Currency Notes. If so specified in an applicable Pricing Supplement relating to a foreign currency Note, the Bank may have the option to make all payments of principal and interest scheduled after the exercise of such option in a currency other than the specified currency. Applicable United States Treasury regulations generally (i) apply the principles contained in the regulations governing contingent payment debt instruments to Dual Currency Notes in the "predominant currency" of the Dual Currency Notes and (ii) apply the rules discussed above with respect to foreign currency Notes with OID for the translation of interest and principal into U.S. dollars. If you are considering the purchase of Dual Currency Notes, you should carefully examine the applicable Pricing Supplement and should consult your own tax advisors regarding the United States federal income tax consequences of the holding and disposition of such Notes.

Reportable Transactions. Treasury regulations issued under the Code meant to require the reporting of certain tax shelter transactions could be interpreted to cover transactions generally not regarded as tax shelters, including certain foreign currency transactions. Under the Treasury regulations, certain transactions are required to be reported to the IRS, including, in certain circumstances, a sale, exchange, redemption, retirement or other disposition of a foreign currency Note or foreign currency received in respect of a foreign currency Note to the extent that such sale, exchange, redemption, retirement or other disposition results in a tax loss in excess of a threshold amount. If you are considering the purchase of a foreign currency Note, you should consult with your own tax advisors to determine the tax return obligations, if any, with respect to an investment in the Notes, including any requirement to file IRS Form 8886 (Reportable Transaction Disclosure Statement). The IRS may impose penalties on any taxpayer that fails to timely file an information return with the IRS with respect to a transaction resulting in a loss that is treated as a reportable transaction.

Index Linked Notes

The tax treatment of a United States Holder of Index Linked Notes will depend on factors including the specific index or indices used to determine indexed payments on the Note and the amount and timing of any contingent payments of principal and interest. Persons considering the purchase of Index Linked Notes should carefully examine the applicable Pricing Supplement and should consult their own tax advisors regarding the United States federal income tax consequences of the holding and disposition of such Notes.

Information Reporting and Backup Withholding

In general, information reporting requirements will apply to certain payments of principal, interest (including OID) and premium paid on Notes and to the proceeds of sale of a Note paid to you (unless you are an exempt recipient). A backup withholding tax may apply to such payments if you fail to provide a taxpayer identification number or a certification of exempt status, or if you fail to report in full dividend and interest income.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against your United States federal income tax liability provided the required information is timely furnished to the IRS.

Certain United States Holders are required to report information relating to an interest in the Notes, subject to certain exceptions (including an exception for Notes held in accounts maintained by certain financial institutions), by attaching a complete IRS Form 8938 (Statement of Specified Foreign Financial Assets) with their tax return for each year in which they hold an interest in the Notes. You are urged to consult your own tax advisors regarding information reporting requirements relating to your ownership of the Notes.

Additional Withholding Requirements

Under FATCA, a "foreign financial institution" (as specifically defined under FATCA) that enters into an agreement with the United States Treasury Department may be required to withhold 30% from certain "foreign passthru payments" made to holders that fail to comply with certain certification and/or information reporting requirements. The term "foreign passthru payment" has not yet been defined by the IRS but is intended to capture payments that are non-United States source but are attributable to a United States source payment. Debt obligations issued before the date which is six months after the publication of final regulations defining the term foreign passthru payment would be grandfathered and therefore not subject to the FATCA rules for foreign passthru payment withholding. In addition, proposed United States Treasury regulations (upon which taxpayers may rely until final regulations are issued) provide that a foreign financial institution would not be required to withhold on foreign passthru payments before the date that is two years after the date of publication of final regulations defining the term foreign passthru payment. Prospective investors should consult their tax advisors regarding the application of the FATCA rules to an investment in the Notes.

Additional Tax Considerations

Persons considering the purchase of Notes should carefully examine the applicable Pricing Supplement and should consult their own tax advisors regarding any special United States federal income tax consequences not discussed herein that may be applicable to the holding and disposition of Notes offered under the Program.

Korean Taxation

Republic of Korea

The information provided below does not purport to be a complete summary of Korean tax law and practice currently applicable. Prospective investors who are in any doubt as to their tax position should consult with their own professional advisors.

The taxation of non-resident individuals and non-Korean corporations ("**Non-Residents**") depends on whether they have a "permanent establishment" (as defined under Korean law and any applicable tax treaty) in Korea to which the relevant Korean source income is attributable or with which such income is effectively connected. Non-Residents without a permanent establishment in Korea are taxed in the manner described below. Non-Residents with permanent establishments in Korea are taxed in accordance with different rules.

Tax on Interest

Interest on the Notes paid to Non-Residents is exempt from income tax and corporation tax (whether payable by withholding or otherwise) pursuant to the Special Tax Treatment Control Law (the "**STTCL**"), so far as the Notes are "foreign currency denominated bonds" issued outside Korea under the STTCL. The term "foreign currency denominated bonds" in this context is not defined under the STTCL. In this regard, the Korean tax authority issued a ruling on September 1, 1990 to the effect that "a notes issuance facility, commercial paper issued in U.S. dollars or Euros or a banker's acceptance" are not treated as the "foreign currency denominated bonds."

If the tax exemption under the STTCL referred to above were to cease to be in effect, the rate of income tax or corporation tax applicable to interest on the Notes, for a Non-Resident without a permanent establishment in Korea, would be 14%. In addition, a tax surcharge called a local income tax would be imposed at the rate of 10% (raising the total tax rate to 15.4%). The tax is withheld by the payer or the Bank.

The tax rates may be reduced by an applicable tax treaty, convention or agreement between Korea and the resident country of the recipient of the income. In order to obtain the benefit of a reduced rate available under applicable tax treaties, a Non-Resident holder must submit an application for entitlement to reduced tax rate to the party liable for the withholding before the receipt of the relevant interest payment (if there is no change in the contents of such application, it is not required to submit such application again within three years thereafter), together with a certificate of the Non-Resident holder's tax residence issued by a competent authority of the Non-Resident holder's resident country. An overseas investment vehicle (which is defined as an organization established in a foreign jurisdiction that manages funds collected through investment solicitation by way of acquiring, disposing, or otherwise investing in proprietary targets and then distributes the outcome of such management to investors, subject to certain exceptions) is also required to obtain the application for entitlement to reduced tax rate from the beneficial owners and submit a report of overseas investment vehicle to the party liable for the withholding, together with a schedule of beneficial owners of the income. However, starting from January 1, 2020, if such overseas investment vehicle is deemed as a beneficial owner pursuant to the Corporate Income Tax Law of Korea (the "**CITL**"), it is required to submit a report of overseas investment vehicle including a schedule of investors in each country, together with the aforementioned application for entitlement to reduced tax rate and certificate of the Non-Resident holder's tax residence. The relevant tax treaties are discussed below.

The tax is withheld by the payer of the interest. As the duty to withhold the tax is required to be on the payer, Korean law does not entitle the person who has suffered the withholding of Korean tax to recover from the

Government any part of the Korean tax withheld, even if he subsequently produces evidence that he was entitled to have his tax withheld at a lower rate, except in certain limited circumstances. Starting with refund claims made on or after January 1, 2009, however, a Non-Resident that was subject to withholding of Korean tax on interest is entitled to claim refund of over-withheld tax directly from the Korean tax authorities with satisfactory evidence within three years from the 10th day in the month following the month in which the payments of interest are made. On or after January 1, 2015, the period to claim refund of over-withheld tax was extended to five years.

Tax on Capital Gains

Korean tax laws currently exclude from Korean taxation gains made by a Non-Resident without a permanent establishment in Korea from the sale of the Notes to other Non-Residents (other than to their permanent establishments in Korea). In addition, capital gains earned by Non-Residents with or without permanent establishments in Korea from the transfer taking place outside Korea of the Notes are currently exempt from taxation by virtue of the STTCL, *provided that* the issuance of the Notes is deemed to be an issuance of foreign currency denominated bonds outside of Korea under the STTCL.

If the exclusion or exemption from Korean taxation referred to above were to cease to be in effect, in the absence of an applicable tax treaty reducing or eliminating tax on capital gains, the applicable rate of tax would be the lower of 11% (including local income tax) of the gross realization proceeds or (subject to the production of satisfactory evidence of the acquisition cost and certain direct transaction costs of the relevant Note) 22% (including local income tax) of the realized gain (i.e., the excess of the gross realization proceeds over the acquisition cost and certain direct transaction costs) made. If such evidence shows that no gain (or a loss) was made on the sale, no Korean tax is payable. There is no provision under relevant Korean law to allow offsetting of gains and losses or otherwise aggregating transactions for the purpose of computing the net gain attributable to sales of notes issued by Korean companies. The purchaser or any other designated withholding agent of the Notes is obliged under Korean law to withhold the applicable amount of Korean tax and make payment thereof to the relevant Korean tax authority. Unless the seller can claim the benefit of an exemption from tax under an applicable tax treaty or on the failure of the seller to produce satisfactory evidence of his acquisition cost and certain direct transaction costs in relation to the instruments being sold, the purchaser or such withholding agent must withhold an amount equal to 11% of the gross realization proceeds. Any amounts withheld by the purchaser or such withholding agent must be paid to the competent Korean tax office. The purchaser or withholding agent must pay any withholding tax no later than the 10th day of the month following the month in which the payment for the purchase of the relevant instruments occurred. Failure to transmit the withheld tax to the Korean tax authorities in time subjects the purchaser or such withholding agent to penalties under Korean tax laws. The Korean tax authorities may attempt to collect such tax from a Non-Resident who is liable for payment of any Korean tax on gains, either as a seller of Notes or a purchaser or withholding agent who is obliged to withhold such tax, through proceedings against payments due to the Non-Resident from its Korean investments and the assets or revenues of any of the Non-Resident's branch or representative offices in Korea.

In addition, in order to obtain the benefit of a tax exemption available under applicable tax treaties, a Non-Resident holder should submit to the purchaser or the withholding agent an application for tax exemption, together with a certificate of the Non-Resident holder's tax residence issued by a competent authority of the Non-Resident holder's residence country. An overseas investment vehicle (subject to certain exceptions) is also required to obtain an application for tax exemption along with a certificate of tax residence from the beneficial owners and submit to the purchaser or the withholding agent a report of overseas investment vehicle thereafter, together with an application for tax exemption and a schedule of beneficial owners. However, starting from January 1, 2020, if such overseas investment vehicle is deemed as a beneficial owner pursuant to the CITL, it is required to submit a report of overseas investment vehicle including a schedule of investors in each country, together with the aforementioned application for tax exemption and certificate of the Non-Resident holder's tax residence. The purchaser or the withholding agent is required to submit such application to its district tax office no later than the ninth day of the month following the month in which sales proceeds are paid. However, this requirement does not apply to exemptions under Korean tax law such as the STTCL.

Inheritance Tax and Gift Tax

Korean inheritance tax is imposed upon (a) all assets (wherever located) of the deceased if at the time of his death he was domiciled in Korea and (b) all property located in Korea that passes on death (irrespective of the domicile of the deceased). Gift tax is imposed in similar circumstances to the above. The taxes are imposed if the value of the relevant property is above a certain limit and the rate varies from 10% to 50% according to the value of the relevant property and the identity of the parties involved. At present, Korea has not entered into any tax treaties regarding its inheritance or gift taxes.

Under Korean inheritance and gift tax laws, bonds issued by Korean corporations are deemed located in Korea irrespective of where they are physically located or by whom they are owned, and, consequently, the Korean inheritance and gift taxes will be imposed on transfers of the Notes by inheritance or gift. Prospective purchasers should consult their personal tax advisors regarding the consequences of the imposition of the Korean inheritance or gift tax.

Stamp Duty and Securities Transaction Tax

No stamp, issue or registration duties will be payable in Korea by the holders in connection with the issue of the Notes except for a nominal amount of stamp duty on certain documents executed in Korea which will be paid by the Bank. No securities transaction tax will be imposed upon the transfer of the Notes.

Tax Treaties

At the date of this offering circular, Korea has tax treaties with, *inter alia*, Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, The Netherlands, New Zealand, Norway, Singapore, Sweden, Switzerland, the United Kingdom and the United States of America, under which the rate of withholding tax on interest is reduced, generally to between 5% and 16.5% (including local income tax), and the tax on capital gains is often eliminated.

The special withholding tax system took effect July 1, 2006. Under the system, there is a special procedure to apply the Korea-Malaysia tax treaty on certain Korean source income. Payments made to the residents of Labuan, Malaysia will be subject to the default Korean withholding tax rates (generally 15.4% for interest on bonds and the lower of 11% of the gross realization proceeds or 22% of the gain made for capital gain (including local income tax)) rather than the reduced or exempted rate available under the Korea-Malaysia tax treaty. A Labuan taxpayer, however, will be given an opportunity to get a refund by proving that it is entitled to the tax treaty benefits as a beneficial owner of the income and a real resident of Labuan, Malaysia. A Labuan taxpayer may also file an application with the National Tax Service (the "**NTS**") for confirmation that it is entitled to the tax treaty benefits and obtain an advance confirmation from the NTS prior to receiving Korean source income.

Each Non-Resident holder should inquire whether he is entitled to the benefit of a tax treaty with respect to any transaction involving the Notes. It is the responsibility of the party claiming the benefits of a tax treaty in respect of interest payments to file with the payer or the Issuer a certificate as to his residence. In the absence of sufficient proof, the payer or the Bank must withhold taxes in accordance with the above discussion.

Withholding and Gross Up

As mentioned above, interest on the Notes that are foreign currency denominated bonds issued outside Korea is exempt from any withholding or deduction on account of income tax or corporation tax pursuant to the STTCL. However, in the event that the payer or the Bank is required by law to make any withholding or deduction for or on account of any Korean taxes (as more fully described in "*Terms and Conditions of the Notes — Taxation*") the Bank has agreed to pay (subject to the customary exceptions as set out in "*Terms and Conditions of the Notes — Taxation*") such additional amounts as may be necessary in order that the net amounts received by the holder of any Note after such withholding or deduction shall equal the respective amounts which would have been received by such holder in the absence of such withholding or deduction.

Proposed Financial Transactions Tax ("FTT")

The European Commission has published a proposal (the "**Commission's Proposal**") for a Directive for a common FTT in Austria, Belgium, Estonia, France, Germany, Greece, Italy, Portugal, Slovakia, Slovenia, and Spain (the "**participating Member States**"). However, Estonia has since stated that it will not participate.

The Commission's Proposal has very broad scope and could, if introduced in its current form, apply to certain dealings in the Notes (including secondary market transactions) in certain circumstances.

Under the Commission's Proposal, the FTT could apply in certain circumstances to persons both within and outside of the participating Member States. Generally, it would apply to certain dealings in the Notes where at least one party is a financial institution, and at least one party is established in a participating Member State. A financial institution may be, or be deemed to be, "established" in a participating Member State in a broad range of circumstances, including (a) by transacting with a person established in a participating Member State or (b) where the financial instrument which is subject to the dealings is issued in a participating Member State.

The FTT remains subject to negotiation between participating Member States and the legality of the proposal is uncertain. It may therefore be altered prior to any implementation, the timing of which remains unclear. Additional European Union Member States may decide to participate and/or certain of the participating Member States may decide to withdraw.

Prospective holders of the Notes are advised to seek their own professional advice in relation to the FTT.

CERTAIN ERISA CONSIDERATIONS

The following is a summary of certain considerations associated with the purchase and holding of the Notes by (a) employee benefit plans that are subject to Title I of the U.S. Employee Retirement Income Security Act of 1974, as amended ("**ERISA**"), (b) plans, individual retirement accounts and other arrangements that are subject to Section 4975 of the U.S. Internal Revenue Code of 1986, as amended (the "**Code**") or provisions under any other U.S. or non-U.S. federal, state, local or other laws or regulations that are similar to such provisions of ERISA or the Code (collectively, "**Similar Laws**"), and (c) entities whose underlying assets are considered to include the assets of any such plan, account or arrangement described above (each of the foregoing described in clauses (a), (b) and (c) referred to hereto as a "**Plan**").

General Fiduciary Matters

ERISA and the Code impose certain duties on persons who are fiduciaries of a Plan subject to Title I of ERISA or Section 4975 of the Code (a "**Covered Plan**") and prohibit certain transactions involving the assets of an a Covered Plan and its fiduciaries or other interested parties. Under ERISA and the Code, any person who exercises any discretionary authority or control over the administration of such a Covered Plan or the management or disposition of the assets of such a Covered Plan, or who renders investment advice for a fee or other compensation to such a Covered Plan, is generally considered to be a fiduciary of the Covered Plan.

In considering an investment in the Notes of a portion of the assets of any Plan, a fiduciary should determine whether the investment is in accordance with the documents and instruments governing the Plan and the applicable provisions of ERISA, the Code or any Similar Law relating to a fiduciary's duties to the Plan including, without limitation, the prudence, diversification, delegation of control and prohibited transaction provisions of ERISA, the Code and any other applicable Similar Laws.

Prohibited Transaction Issues

Section 406 of ERISA and Section 4975 of the Code prohibit Covered Plans from engaging in specified transactions involving plan assets with persons or entities who are "parties in interest," within the meaning of ERISA, or "disqualified persons," within the meaning of Section 4975 of the Code, unless an exemption is available. A party in interest or disqualified person who engaged in a non-exempt prohibited transaction may be subject to excise taxes and other penalties and liabilities under ERISA and the Code. In addition, the fiduciary of the Covered Plan that engaged in such a non-exempt prohibited transaction may be subject to penalties and liabilities under ERISA and the Code. The acquisition and/or holding of Notes by a Covered Plan with respect to which the Bank, a Dealer or any of their respective affiliates is considered a party in interest or a disqualified person may constitute or result in a direct or indirect prohibited transaction under Section 406 of ERISA and/or Section 4975 of the Code, unless the investment is acquired and is held in accordance with an applicable statutory, class or individual prohibited transaction exemption. In this regard, the U.S. Department of Labor has issued prohibited transaction class exemptions, or "**PTCEs,**" that may apply to the acquisition and holding of the Notes. These class exemptions include, without limitation, PTCE 84-14 respecting transactions determined by independent qualified professional asset managers, PTCE 90-1 respecting insurance company pooled separate accounts, PTCE 91-38 respecting bank collective investment funds, PTCE 95-60 respecting life insurance company general accounts and PTCE 96-23 respecting transactions determined by in-house asset managers. In addition, Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code provide limited relief from the prohibited transaction provisions of ERISA and Section 4975 of the Code for certain transactions, *provided that* neither the issuer of the securities nor any of its affiliates (directly or indirectly) have or exercise any discretionary authority or control or render any investment advice with respect to the assets of any Covered Plan involved in the transaction and provided further that the Covered Plan pays no more than adequate consideration in connection with the transaction. Each of the above-noted exemptions contains conditions and limitations on its application. Fiduciaries of Covered Plans considering acquiring and/or holding the Notes (or any beneficial interest therein) in reliance on these or any other exemption should carefully review the exemption with legal counsel to assure it is applicable. There can be no assurance that all of the conditions of any such exemptions will be satisfied.

Because of the foregoing, the Notes should not be acquired or held by any person investing "plan assets" of any Plan, unless such acquisition and holding will not constitute a non-exempt prohibited transaction under ERISA and the Code or a similar violation of any applicable Similar Laws.

Representation

Accordingly, by acceptance of a Note or any beneficial interest therein, each purchaser and subsequent transferee of a Note or any beneficial interest therein will be deemed to have represented and warranted that either (i) no portion of the assets used by such purchaser or transferee to acquire or hold the Note or any beneficial interest therein constitutes assets of any Plan or (ii) the acquisition and holding of the Note or any beneficial interest therein by such purchaser or transferee will not result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code or a similar violation under any applicable Similar Laws.

The foregoing discussion is general in nature and is not intended to be all inclusive. Due to the complexity of these rules and the penalties that may be imposed upon persons involved in non-exempt prohibited transactions, it is particularly important that fiduciaries, or other persons considering acquiring the Notes on behalf of, or with the assets of, any Plan, consult with their counsel regarding the potential applicability of ERISA, Section 4975 of the Code and any Similar Laws to such investment and whether an exemption would be applicable to the acquisition and holding of the Notes. In this regard, neither this discussion nor anything provided in this offering circular is or is intended to be investment advice directed at any potential Plan purchasers or at Plan purchasers generally and such purchasers of any Notes (or beneficial interests therein) should consult and rely on their own counsel and advisers as to whether an investment in Notes is suitable for the Plan.

BOOK-ENTRY CLEARANCE SYSTEMS

The information set out below is subject to any change in or reinterpretation of the rules, regulations and procedures of DTC, Euroclear or Clearstream (together, the "**Clearing Systems**") currently in effect. Investors wishing to use the facilities of any of the Clearing Systems are advised to confirm the continued applicability of the rules, regulations and procedures of the relevant Clearing System. None of the Issuer, the Arranger, any Dealer nor any party to the Agency Agreement will have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the Notes held through the facilities of any Clearing System or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests. The relevant Pricing Supplement will specify the Clearing System(s) applicable for each Series.

Book-entry Systems

DTC

DTC has advised the Issuer that it is a limited purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a "clearing corporation" within the meaning of the New York Uniform Commercial Code and a "clearing agency" registered pursuant to Section 17A of the Exchange Act. DTC holds securities that its participants ("**Participants**") deposit with DTC. DTC also facilitates the settlement among Participants of securities transactions, such as transfers and pledges, in deposited securities through electronic computerized book-entry changes in Participants' accounts, thereby eliminating the need for physical movement of securities certificates. Direct Participants include securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is owned by a number of its direct Participants and by the New York Stock Exchange, Inc., the American Stock Exchange, Inc. and the National Association of Securities Dealers, Inc. Access to the DTC System is also available to others such as securities brokers and dealers, banks and trust companies that clear through or maintain a custodial relationship with a direct Participant, either directly or indirectly ("**Indirect Participants**").

Under the rules, regulations and procedures creating and affecting DTC and its operations ("**Rules**"), DTC makes book-entry transfers of Registered Notes among direct Participants on whose behalf it acts with respect to Notes accepted into DTC's book-entry settlement system ("**DTC Notes**") as described below and receives and transmits distributions of principal and interest on DTC Notes. The Rules are on file with the U.S. Securities and Exchange Commission. Direct Participants and Indirect Participants with which beneficial owners of DTC Notes ("**Owners**") have accounts with respect to the DTC Notes similarly are required to make book-entry transfers and receive and transmit such payments on behalf of their respective Owners. Accordingly, although Owners who hold DTC Notes through direct Participants or Indirect Participants will not possess Registered Notes, the Rules, by virtue of the requirements described above, provide a mechanism by which direct Participants will receive payments and will be able to transfer their interest in respect of the DTC Notes.

Purchases of DTC Notes under the DTC system must be made by or through Direct Participants, which will receive a credit for the DTC Notes on DTC's records. The ownership interest of each actual purchaser of each DTC Note ("**Beneficial Owner**") is in turn to be recorded on the direct and Indirect Participant's records. Beneficial Owners will not receive written confirmation from DTC of their purchase, but Beneficial Owners are expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the DTC Notes are to be accomplished by entries made on the books of Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in DTC Notes, except in the event that use of the book-entry system for the DTC Notes is discontinued.

To facilitate subsequent transfers, all DTC Notes deposited by Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co. The deposit of DTC Notes with DTC and their registration in the name of Cede & Co. effect no change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the DTC Notes; DTC's records reflect only the identity of the direct Participants to whose accounts such DTC Notes are credited, which may or may not be the Beneficial Owners. The Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to direct Participants, by direct Participants to Indirect Participants, and by direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

Redemption notices shall be sent to Cede & Co. If less than all of the DTC Notes within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. will consent or vote with respect to DTC Notes. Under its usual procedures, DTC mails an Omnibus Proxy to the Issuer as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the DTC Notes are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payments on the DTC Notes will be made to DTC. DTC's practice is to credit direct Participants' accounts on the due date for payment in accordance with their respective holdings shown on DTC's records unless DTC has reason to believe that it will not receive payment on the due date. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name", and will be the responsibility of such Participant and not of DTC or the Issuer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to DTC is the responsibility of the Issuer, disbursement of such payments to direct Participants is the responsibility of DTC, and disbursement of such payments to the Beneficial Owners is the responsibility of direct and Indirect Participants.

Under certain circumstances, including if there is an Event of Default under the Notes, DTC will exchange the DTC Notes for definitive Registered Notes, which it will distribute to its Participants in accordance with their proportionate entitlements and which, if representing interests in a Rule 144A Global Note, will be legended as set forth under "*Subscription and Sale and Transfer and Selling Restrictions*."

Since DTC may only act on behalf of direct Participants, who in turn act on behalf of Indirect Participants, any Owner desiring to pledge DTC Notes to persons or entities that do not participate in DTC, or otherwise take actions with respect to such DTC Notes, will be required to withdraw its Registered Notes from DTC as described below.

Euroclear and Clearstream

Euroclear and Clearstream each holds securities for its customers and facilitates the clearance and settlement of securities transactions by electronic book-entry transfer between their respective account holders. Euroclear and Clearstream provide various services including safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Euroclear and Clearstream also deal with domestic securities markets in several countries through established depository and custodial relationships. Euroclear and Clearstream have established an electronic bridge between their two systems across which their respective participants may settle trades with each other.

Euroclear and Clearstream customers are world-wide financial institutions, including underwriters, securities brokers and dealers, banks, trust companies and clearing corporations. Indirect access to Euroclear and Clearstream is available to other institutions that clear through or maintain a custodial relationship with an account holder of either system.

Book-entry Ownership of and Payments in respect of DTC Notes

The Bank may apply to DTC in order to have any Tranche of Notes represented by a Registered Global Note accepted in its book-entry settlement system. Upon the issue of any such Registered Global Note, DTC or its custodian will credit, on its internal book-entry system, the respective nominal amounts of the individual beneficial interests represented by such Registered Global Note to the accounts of persons who have accounts with DTC. Such accounts initially will be designated by or on behalf of the relevant Dealer. Ownership of beneficial interests in such a Registered Global Note will be limited to direct Participants or Indirect Participants, including, in the case of any Regulation S Global Note, the respective depositaries of Euroclear and Clearstream. Ownership of beneficial interests in a Registered Global Note accepted by DTC will be shown on, and the transfer of such ownership will be effected only through, records maintained by DTC or its nominee (with respect to the interests of direct Participants) and the records of direct Participants (with respect to interests of Indirect Participants).

Payments in U.S. dollars of principal and interest in respect of a Registered Global Note accepted by DTC will be made to the order of DTC or its nominee as the registered holder of such Note. In the case of any payment in a currency other than U.S. dollars, payment will be made to the Exchange Agent on behalf of DTC or its nominee and the Exchange Agent will (in accordance with instructions received by it) remit all or a portion of such payment for credit directly to the beneficial holders of interests in the Registered Global Note in the currency in which such payment was made and/or cause all or a portion of such payment to be converted into U.S. dollars and credited to the applicable Participants' account.

The Bank expects DTC to credit accounts of direct Participants on the applicable payment date in accordance with their respective holdings as shown in the records of DTC unless DTC has reason to believe that it will not receive payment on such payment date. The Bank also expects that payments by Participants to beneficial owners of Notes will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers, and will be the responsibility of such Participant and not the responsibility of DTC, the Principal Paying Agent, the Registrar or the Issuer. Payment of principal, premium, if any, and interest, if any, on Notes to DTC is the responsibility of the Issuer.

Transfers of Notes Represented by Registered Global Notes

Transfers of any interests in Notes represented by a Registered Global Note within DTC, Euroclear and Clearstream will be effected in accordance with the customary rules and operating procedures of the relevant clearing system. The laws in some States within the United States require that certain persons take physical delivery of securities in definitive form. Consequently, the ability to transfer Notes represented by a Registered Global Note to such persons may depend upon the ability to exchange such Notes for Notes in definitive form. Similarly, because DTC can only act on behalf of direct Participants in the DTC system who in turn act on behalf of Indirect Participants, the ability of a person having an interest in Notes represented by a Registered Global

Note accepted by DTC to pledge such Notes to persons or entities that do not participate in the DTC system or otherwise to take action in respect of such Notes may depend upon the ability to exchange such Notes for Notes in definitive form. The ability of any holder of Notes represented by a Registered Global Note accepted by DTC to resell, pledge or otherwise transfer such Notes may be impaired if the proposed transferee of such Notes is not eligible to hold such Notes through a direct or indirect participant in the DTC system.

Subject to compliance with the transfer restrictions applicable to the Registered Notes described under "*Subscription and Sale and Transfer and Selling Restrictions*", cross-market transfers between DTC, on the one hand, and directly or indirectly through Clearstream or Euroclear accountholders, on the other, will be effected by the relevant clearing system in accordance with its rules and through action taken by the Registrar, the Fiscal Agent and any custodian ("**Custodian**") with whom the relevant Registered Global Notes have been deposited.

On or after the Issue Date for any Series, transfers of Notes of such Series between accountholders in Clearstream and Euroclear and transfers of Notes of such Series between participants in DTC will generally have a settlement date three business days after the trade date (T+3). The customary arrangements for delivery versus payment will apply to such transfers.

Cross-market transfers between accountholders in Clearstream or Euroclear and DTC participants will need to have an agreed settlement date between the parties to such transfer. Because there is no direct link between DTC, on the one hand, and Clearstream and Euroclear, on the other, transfers of interests in the relevant Registered Global Notes will be effected through the Registrar, the Fiscal Agent and the Custodian receiving instructions (and, where appropriate, certification) from the transferor and arranging for delivery of the interests being transferred to the credit of the designated account for the transferee. In the case of cross-market transfers, settlement between Euroclear or Clearstream accountholders and DTC participants cannot be made on a delivery versus payment basis. The securities will be delivered on a free delivery basis and arrangements for payment must be made separately.

DTC, Clearstream and Euroclear have each published rules and operating procedures designed to facilitate transfers of beneficial interests in Registered Global Notes among participants and accountholders of DTC, Clearstream and Euroclear. However, they are under no obligation to perform or continue to perform such procedures, and such procedures may be discontinued or changed at any time. None of the Issuer, the Agents or any Dealer will be responsible for any performance by DTC, Clearstream or Euroclear or their respective direct or indirect participants or accountholders of their respective obligations under the rules and procedures governing their operations and none of them will have any liability for any aspect of the records relating to or payments made on account of beneficial interests in the Notes represented by Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial interests.

CMU

Unless otherwise specified in the applicable Pricing Supplement, CMU Notes will initially be issued in registered form and represented by a global certificate (the "**CMU Global Note**") registered in the name of HKMA, in its capacity as operator of the CMU and shall be delivered to and held by a sub-custodian nominated by the HKMA as operator of the CMU, or the CMU operator. The CMU Global Note will be held for the account of CMU members who have accounts with the CMU operator, or the CMU participants. For persons seeking to hold a beneficial interest in the Notes through Euroclear or Clearstream, such persons will hold their interests through an account opened and held by Euroclear or Clearstream with the CMU operator. Interests in the CMU Global Note will only be shown on, and transfers of interests will be effected through, records maintained by the CMU operator.

Because the CMU operator can act only on behalf of the CMU participants, who in turn may act on behalf of persons who hold interests through them, or indirect participants, the ability of persons having interests in the CMU Global Note to pledge such interests to persons or entities that are not CMU participants, or otherwise take action in respect of such interests, may be affected by the lack of definitive notes.

While the CMU Global Note representing the Notes is held by or on behalf of the CMU operator, payments of interest or principal will be made to the persons for whose account a relevant interest in the CMU Global Note is credited as being held by the CMU operator at the relevant time, as notified to the Principal Paying Agent by the CMU operator in a relevant CMU instrument position report (as defined in the rules of the CMU) or in any other relevant notification by the CMU operator. So long as the Notes are represented by the CMU Global Note that is held by or on behalf of the CMU operator, such payment by the Issuer will discharge the Issuer's obligations in respect of that payment. Any payments by the CMU participants to indirect participants will be governed by arrangements agreed between the CMU participants and the indirect participants and will continue to depend on the inter-bank clearing system and traditional payment methods. Such payments will be the sole responsibility of such CMU participants.

Payments, transfers, exchanges and other matters relating to interests in the CMU Global Note may be subject to various policies and procedures adopted by the CMU operator from time to time. None of the Issuer, the Principal Paying Agent, the Registrar, the Paying Agents, the CMU Lodging Agent or any other Agent will have any responsibility or liability for any aspect of the CMU operator's records relating to, or for payments made on account of, interests in the CMU Global Note, or for maintaining, supervising or reviewing any records relating to such interests.

For so long as all of the Notes are represented by the CMU Global Note and such CMU Global Note is held on behalf of the CMU operator, notices to Noteholders may be given by delivery of the relevant notice to the persons shown in a CMU instrument position report issued by the CMU operator on the business day preceding the date of dispatch of such notice as holding interests in the CMU Global Note for communication to the CMU participants. Any such notice shall be deemed to have been given to the Noteholders on the second business day on which such notice is delivered to the persons shown in the relevant CMU instrument position report as aforesaid. Indirect participants will have to rely on the CMU participants (through whom they hold the Notes, in the form of interests in the global certificate) to deliver the notices to them, subject to the arrangements agreed between the indirect participants and the CMU participants.

The CMU operator is under no obligation to maintain or continue to operate the CMU and the CMU operator is under no obligation to perform or continue to perform the procedures described above. Accordingly, the CMU and such procedures may be discontinued or modified at any time. None of the Issuer, the Principal Paying Agent, the Registrar, the Paying Agents, the CMU Lodging Agent or any other Agent will have any responsibility for the performance by the CMU operator or the CMU participants of their respective obligations under the rules and procedures governing their operations.

SUBSCRIPTION AND SALE AND TRANSFER AND SELLING RESTRICTIONS

The Dealers have, in an amended and restated program agreement dated March 15, 2016, as supplemented and amended from time to time (the "**Program Agreement**"), agreed with the Issuer a basis upon which they or any of them may from time to time agree to purchase or procure purchasers for Notes. Any such agreement will extend to those matters stated under "*Form of the Notes*" and "*Terms and Conditions of the Notes*." In the Program Agreement, the Issuer has agreed to reimburse the Dealers for certain of their expenses in connection with the establishment of the Program and the issue of Notes under the Program and to indemnify the Dealers against certain liabilities incurred by them in connection therewith.

In order to facilitate the offering of any Tranche of the Notes, certain persons participating in the offering of the Tranche may to the extent permitted by applicable laws and regulations engage in transactions that stabilize, maintain or otherwise affect the market price of the relevant Notes during and after the offering of the Tranche. Specifically such persons may over-allot or create a short position in the Notes for their own account by selling more Notes than have been sold to them by the Issuer. Such persons may also elect to cover any such short position by purchasing Notes in the open market. In addition, such persons may stabilize or maintain the price of the Notes by bidding for or purchasing Notes in the open market and may impose penalty bids, under which selling concessions allowed to syndicate members or other broker-dealers participating in the offering of the Notes are reclaimed if Notes previously distributed in the offering are repurchased in connection with stabilization transactions or otherwise. The effect of these transactions may be to stabilize or maintain the market price of the Notes at a level above that which might otherwise prevail in the open market. The imposition of a penalty bid may also affect the price of the Notes to the extent that it discourages resales thereof. No representation is made as to the magnitude or effect of any such stabilizing or other transactions. Such transactions, if commenced, may be discontinued at any time. Stabilization activities are subject to certain prescribed time limits in certain jurisdictions.

Transfer Restrictions

As a result of the following restrictions, purchasers of Notes in the United States are advised to consult legal counsel prior to making any purchase, offer, sale, resale or other transfer of such Notes.

Each purchaser of Registered Notes or person wishing to transfer an interest from one Registered Global Note to another or from global to definitive form or vice versa, will be required to acknowledge, represent and agree as follows (terms used in this paragraph that are defined in Rule 144A or in Regulation S are used herein as defined therein):

(i) that either: (a) it is a QIB, purchasing (or holding) the Notes for its own account or for the account of one or more QIBs and it is aware that any sale to it is being made in reliance on Rule 144A or (b) it is an Institutional Accredited Investor, that, prior to its purchase of the Notes has delivered to the Registrar an IAI Investment Letter in the form as set forth below or (c) it is the beneficial owner of such Notes and (a) it is outside the United States and is not a U.S. person and (b) it is not an affiliate of the Issuer or a person acting on behalf of such an affiliate;

(ii) that the Notes have not been and will not be registered under the Securities Act or any other applicable U.S. state securities laws and may not be offered, sold, pledged or otherwise transferred within the United States or to, or for the account or benefit of, U.S. persons except as set forth below;

(iii) that, unless it holds an interest in a Regulation S Global Note and either is a person located outside the United States or is not a U.S. person, if in the future it decides to resell, pledge or otherwise transfer the

Notes or any beneficial interests in the Notes, it will do so, prior to the date which is one year after the later of the last Issue Date for the Series and the last date on which the Issuer or an affiliate of the Issuer was the owner of such Notes, only (a) to the Issuer or any affiliate thereof, (b) inside the United States to a person whom the seller reasonably believes is a QIB purchasing for its own account or for the account of a QIB in a transaction meeting the requirements of Rule 144A, (c) outside the United States in compliance with Rule 903 or Rule 904 under the Securities Act, (d) pursuant to the exemption from registration provided by Rule 144 under the Securities Act (if available) or (e) pursuant to an effective registration statement under the Securities Act, in each case in accordance with all applicable U.S. state securities laws;

(iv) it will, and will require each subsequent holder to, notify any purchaser of the Notes from it of the resale restrictions referred to in paragraph (iii) above, if then applicable;

(v) that Notes initially offered in the United States to QIBs will be represented by one or more Restricted Global Notes, that Notes offered to Institutional Accredited Investors will be in the form of Definitive IAI Registered Notes and that Notes offered outside the United States in reliance on Regulation S will be represented by one or more Regulation S Global Notes;

(vi) that the Notes, other than the Regulation S Global Notes, will bear a legend to the following effect unless otherwise agreed to by the Issuer:

"THIS NOTE HAS NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "**SECURITIES ACT**"), OR ANY OTHER APPLICABLE U.S. STATE SECURITIES LAWS AND, ACCORDINGLY, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF, THE HOLDER (A) REPRESENTS THAT (1) IT IS A "**QUALIFIED INSTITUTIONAL BUYER**" (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT) PURCHASING THIS NOTE FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF ONE OR MORE QUALIFIED INSTITUTIONAL BUYERS OR (2) IT IS AN INSTITUTIONAL "**ACCREDITED INVESTOR**" (AS DEFINED IN RULE 501(A)(1), (2), (3) OR (7) UNDER THE SECURITIES ACT) (AN "**INSTITUTIONAL ACCREDITED INVESTOR**"); (B) AGREES THAT IT WILL NOT RESELL OR OTHERWISE TRANSFER THIS NOTE EXCEPT IN ACCORDANCE WITH THE AGENCY AGREEMENT AND, PRIOR TO THE DATE WHICH IS ONE YEAR AFTER THE LATER OF THE LAST ISSUE DATE FOR THE SERIES AND THE LAST DATE ON WHICH THE ISSUER OR AN AFFILIATE OF THE ISSUER WAS THE OWNER OF SUCH NOTE OTHER THAN (1) TO THE ISSUER OR ANY AFFILIATE THEREOF, (2) INSIDE THE UNITED STATES TO A PERSON WHOM THE SELLER REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER WITHIN THE MEANING OF RULE 144A UNDER THE SECURITIES ACT PURCHASING FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF A QUALIFIED INSTITUTIONAL BUYER IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144A, (3) TO NON-U.S. PERSONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH RULE 903 OR RULE 904 UNDER THE SECURITIES ACT, (4) PURSUANT TO THE EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE) OR (5) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT, IN EACH CASE IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE STATES OF THE UNITED STATES AND ANY OTHER JURISDICTION; AND (C) IT AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THIS NOTE IS TRANSFERRED A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND. NO REPRESENTATION CAN BE MADE AS TO THE AVAILABILITY OF THE EXEMPTION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT FOR RESALES OF THIS NOTE.

THIS NOTE AND RELATED DOCUMENTATION (INCLUDING, WITHOUT LIMITATION, THE AGENCY AGREEMENT REFERRED TO HEREIN) MAY BE AMENDED OR SUPPLEMENTED FROM TIME TO TIME, WITHOUT THE CONSENT OF, BUT UPON NOTICE TO, THE HOLDERS OF SUCH NOTE SENT TO THEIR REGISTERED ADDRESSES, TO MODIFY THE RESTRICTIONS ON AND PROCEDURES FOR RESALES AND OTHER TRANSFERS OF THIS NOTE TO REFLECT ANY CHANGE IN APPLICABLE LAW OR REGULATION (OR THE INTERPRETATION THEREOF) OR IN PRACTICES RELATING TO RESALES OR OTHER TRANSFERS OF RESTRICTED SECURITIES GENERALLY. THE HOLDER OF THIS NOTE SHALL BE DEEMED, BY ITS ACCEPTANCE OR PURCHASE HEREOF, TO HAVE AGREED TO ANY SUCH AMENDMENT OR SUPPLEMENT (EACH OF WHICH SHALL BE CONCLUSIVE AND BINDING ON THE HOLDER HEREOF AND ALL FUTURE HOLDERS OF THIS NOTE AND ANY SECURITIES ISSUED IN EXCHANGE OR SUBSTITUTION THEREFOR, WHETHER OR NOT ANY NOTATION THEREOF IS MADE HEREON).";

(vii) that the Notes offered in reliance on Rule 144A will be represented by the Restricted Note. Before any interest in the Restricted Note may be offered, sold, pledged or otherwise transferred to a person who takes delivery in the form of an interest in the Unrestricted Note, it will be required to provide a Transfer Agent with a written certification (in the form provided in the Agency Agreement) as to compliance with applicable securities laws;

(viii) if it is outside the United States and is not a U.S. person, that if it should resell or otherwise transfer the Notes prior to the expiration of the distribution compliance period (defined as 40 days after the later of the commencement of the offering and the closing date with respect to the original issuance of the Notes), it will do so only (a)(i) outside the United States in compliance with Rule 903 or Rule 904 under the Securities Act or (ii) to a QIB in compliance with Rule 144A and (b) in accordance with all applicable U.S. state securities laws; and it acknowledges that the Regulation S Global Notes will bear a legend to the following effect unless otherwise agreed to by the Issuer:

"THIS NOTE HAS NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "**SECURITIES ACT**"), OR ANY OTHER APPLICABLE U.S. STATE SECURITIES LAWS AND, ACCORDINGLY, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS EXCEPT IN ACCORDANCE WITH THE AGENCY AGREEMENT AND PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OR PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT. THIS LEGEND SHALL CEASE TO APPLY UPON THE EXPIRY OF THE PERIOD OF 40 DAYS AFTER THE COMPLETION OF THE DISTRIBUTION OF ALL THE NOTES OF THE TRANCHE OF WHICH THIS NOTE FORMS A PART.";

(ix) that the Notes offered in reliance on Regulation S will be represented by the Unrestricted Note. Prior to the expiration of the distribution compliance period, before any interest in the Restricted Note may be offered, sold, pledged or otherwise transferred to a person who takes delivery in the form of an interest in the Unrestricted Note, it will be required to provide a Transfer Agent with a written certification (in the form provided in the Agency Agreement) as to compliance with applicable securities laws;

(x) that it represents and warrants, and will require each subsequent holder to represent and warrant, that either (i) no portion of the assets used by it to acquire or hold the Notes or any beneficial interest therein constitutes assets of any (a) employee benefit plan subject to Title I of the U.S. Employee Retirement

Income Security Act of 1974, as amended ("**ERISA**"), (b) plan, individual retirement account or other arrangement that is subject to Section 4975 of the Internal Revenue Code of 1986, as amended (the "**Code**"), or provisions under any other U.S. or non-U.S. federal, state, local or other laws or regulations that are similar to such provisions of ERISA or the Code (collectively, "**Similar Laws**"), or (c) entity whose underlying assets are considered to include the assets of any such plan, account or arrangement described in clause (a) or (b), or (ii) its acquisition and holding of the Notes or any beneficial interest therein by will not result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code, or a similar violation under any applicable Similar Laws; and

(xi) that the Issuer and others will rely upon the truth and accuracy of the foregoing acknowledgements, representations and agreements and agrees that if any of such acknowledgements, representations or agreements made by it are no longer accurate, it shall promptly notify the Issuer; and if it is acquiring any Notes as a fiduciary or agent for one or more accounts it represents that it has sole investment discretion with respect to each such account and that it has full power to make the foregoing acknowledgements, representations and agreements on behalf of each such account.

Institutional Accredited Investors who purchase Registered Notes in definitive form offered and sold in the United States in reliance upon the exemption from registration provided by Regulation D of the Securities Act are required to execute and deliver to the Registrar an IAI Investment Letter. Upon execution and delivery of an IAI Investment Letter by an Institutional Accredited Investor, Notes will be issued in definitive registered form, see "*Form of the Notes*."

The IAI Investment Letter will state, among other things, the following:

(i) that the Institutional Accredited Investor has received a copy of this and such other information as it deems necessary in order to make its investment decision;

(ii) that the Institutional Accredited Investor understands that any subsequent transfer of the Notes is subject to certain restrictions and conditions set forth in this and the Notes (including those set out above) and that it agrees to be bound by, and not to resell, pledge or otherwise transfer the Notes except in compliance with, such restrictions and conditions and the Securities Act;

(iii) that, in the normal course of its business, the Institutional Accredited Investor invests in or purchases securities similar to the Notes;

(iv) that the Institutional Accredited Investor is an Institutional Accredited Investor within the meaning of Rule 501(a)(1), (2), (3) or (7) of Regulation D under the Securities Act and has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment in the Notes, and it and any accounts for which it is acting are each able to bear the economic risk of its or any such accounts' investment for an indefinite period of time;

(v) that the Institutional Accredited Investor is acquiring the Notes purchased by it for its own account or for one or more accounts (each of which is an Institutional Accredited Investor) as to each of which it exercises sole investment discretion and not with a view to any distribution of the Notes, subject, nevertheless, to the understanding that the disposition of its property shall at all times be and remain within its control;

(vi) that either (i) no portion of the assets used by the Institutional Accredited Investor to acquire or hold the Notes or any beneficial interest therein constitutes assets of any (a) employee benefit plan subject to Title I of the U.S. Employee Retirement Income Security Act of 1974, as amended ("**ERISA**"), (b) plan, individual retirement account or other arrangement that is subject to Section 4975 of the Internal Revenue Code of 1986, as amended (the "**Code**"), or provisions under any other U.S. or non-U.S. federal, state, local or other laws or regulations that are similar to such provisions of ERISA or the Code (collectively, "**Similar Laws**"), or (c) entity whose underlying assets are considered to include the assets of any such plan, account or arrangement described in clause (a) or (b), or (ii) the acquisition and holding of the Notes or any beneficial interest therein by the Institutional Accredited Investor will not result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code, or a similar violation under any applicable Similar Laws; and

(vii) that, in the event that the Institutional Accredited Investor purchases Notes, it will acquire Notes having a minimum purchase price of at least US$500,000 (or the approximate equivalent in another Specified Currency).

No sale of Legended Notes in the United States to any one purchaser will be for less than US$200,000 (or its foreign currency equivalent) principal amount or, in the case of sales to Institutional Accredited Investors, US$500,000 (or its foreign currency equivalent) principal amount and no Legended Note will be issued in connection with such a sale in a smaller principal amount. If the purchaser is a non-bank fiduciary acting on behalf of others, each person for whom it is acting must purchase at least US$200,000 (or its foreign currency equivalent) or, in the case of sales to Institutional Accredited Investors, US$500,000 (or its foreign currency equivalent) principal amount of Registered Notes.

Selling Restrictions

United States of America

The Notes have not been and will not be registered under the Securities Act and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except (i) to QIBs in reliance on Rule 144A, (ii) to Institutional Accredited Investors, that, prior to their purchase of the Notes have furnished an IAI Investment Letter and (iii) in accordance with Regulation S under the Securities Act.

The Bearer Notes are subject to U.S. tax law requirements and may not be offered, sold or delivered within the United States or its possessions or to a U.S. person, except in certain transactions permitted by U.S. tax regulations. Terms used in this paragraph have the meaning given to them by the Code and regulations thereunder.

In connection with any Notes which are offered or sold outside the United States in reliance on an exemption from the registration requirements of the Securities Act provided under Regulation S ("**Regulation S Notes**") each Dealer has represented and agreed, and each further Dealer appointed under the Program will be required to represent and agree, that it will not offer, sell or deliver such Regulation S Notes (i) as part of their distribution at any time or (ii) otherwise until 40 days after the completion of the distribution, as determined and certified by the relevant Dealer or, in the case of an issue of Notes on a syndicated basis, the relevant lead manager, of all Notes of the Tranche of which such Regulation S Notes are a part, within the United States or to, or for the account or benefit of, U.S. persons. Each Dealer has further agreed, and each further Dealer appointed under the Program will be required to agree, that it will send to each dealer to which it sells any Regulation S Notes during the distribution compliance period a confirmation or other notice setting forth the restrictions on offers and sales of the Regulation S Notes within the United States or to, or for the account or benefit of, U.S. persons.

Until 40 days after the commencement of the offering of any Series of Notes, an offer or sale of such Notes within the United States by any dealer (whether or not participating in the offering) may violate the registration requirements of the Securities Act if such offer or sale is made otherwise than in accordance with an applicable exemption from registration under the Securities Act.

Dealers may arrange for the resale of Notes to QIBs pursuant to Rule 144A and each such purchaser of Notes is hereby notified that the Dealers may be relying on the exemption from the registration requirements of the Securities Act provided by Rule 144A. The minimum aggregate principal amount of Notes which may be purchased by a QIB pursuant to Rule 144A is US$200,000 (or the approximate equivalent thereof in any other currency).

Each issuance of Index Linked Notes or Dual Currency Notes shall be subject to such additional U.S. selling restrictions as the Issuer and the relevant Dealer may agree as a term of the issuance and purchase of such Notes, which additional selling restrictions shall be set out in the applicable Pricing Supplement.

By acceptance of a Note, each purchaser and subsequent transferee of a Note or any beneficial interest therein will be deemed to have represented and warranted that either (i) no portion of the assets used by such purchaser or transferee to acquire or hold the Notes or any beneficial interest therein constitutes assets of any (a) employee benefit plan subject to Title I of the U.S. Employee Retirement Income Security Act of 1974, as amended ("**ERISA**"), (b) plan, individual retirement account or other arrangement that is subject to Section 4975 of the Internal Revenue Code of 1986, as amended (the "**Code**"), or provisions under any other U.S. or non-U.S. federal, state, local or other laws or regulations that are similar to such provisions of ERISA or the Code (collectively, "**Similar Laws**"), or (c) entity whose underlying assets are considered to include the assets of any such plan, account or arrangement described in clause (a) or (b), or (ii) the acquisition and holding of the Notes or any beneficial interest therein by such purchaser or transferee will not result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code, or a similar violation under any applicable Similar Laws.

European Economic Area and the United Kingdom

Unless the final terms (or pricing supplement, as the case may be) in relation to the Notes specifies the "Prohibition of Sales to EEA and UK Retail Investors" as "Not Applicable", each Dealer has represented and agreed, and each further Dealer appointed under the Program will be required to represent and agree, that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Notes which are the subject of the offering contemplated by the offering circular as supplemented by the final terms (or pricing supplement, as the case may be) in relation thereto to any retail investor in the European Economic Area ("**EEA**") or in the United Kingdom ("**UK**"). For the purposes of this provision:

(a) the expression "retail investor" means a person who is one (or more) of the following:

  (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "**MiFID II**"); or

  (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended, the "**Insurance Distribution Directive**"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or

  (iii) not a qualified investor as defined in Regulation (EU) 2017/1129 (as amended, the "**Prospectus Regulation**"); and

(b) the expression an "offer" includes the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe for the Notes.

If the final terms (or pricing supplement, as the case may be) in relation to the Notes specifies "Prohibition of Sales to EEA and UK Retail Investors" as "Not Applicable", in relation to each Member State of the EEA and the UK (each, a "**Relevant State**"), no offer of Notes which are the subject of the offering contemplated by the offering circular may be made to the public in that Relevant State other than:

(a) to any legal entity which is a "qualified investor" as defined in the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than "qualified investors" as defined in the Prospectus Regulation), subject to obtaining the prior consent of the relevant dealer or dealers nominated by the Issuer for any such offer; or

(c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of Notes shall result in a requirement for the Issuer or any Dealer to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or a supplemental prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer of Notes to the public" in relation to any Notes in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe for the Notes.

United Kingdom

In the United Kingdom, the offering circular as supplemented by the final terms (or pricing supplement, as the case may be) is being distributed only to, and is directed only at, persons who are "qualified investors" (as defined in the Prospectus Regulation) who are (i) persons having professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "**Order**"), or (ii) high net worth entities falling within Article 49(2)(a) to (d) of the Order, or (iii) persons to whom it would otherwise be lawful to distribute it, all such persons together being referred to as "**Relevant Persons**". In the United Kingdom, the Notes are only available to, and any invitation, offer or agreement to subscribe, purchase or otherwise acquire such Notes will be engaged in only with, Relevant Persons. The offering circular as supplemented by the final terms (or pricing supplement, as the case may be) is and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by any recipients to any other person in the United Kingdom. Any person in the United Kingdom that is not a Relevant Person should not act or rely on the offering circular as supplemented by the final terms (or pricing supplement, as the case may be) or its contents. The Notes are not being offered to the public in the United Kingdom.

Each Dealer has represented and agreed, and each further Dealer appointed under the Program will be required to represent and agree, that:

(a) in relation to any Notes which have a maturity of less than one year, (i) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business and (ii) it has not offered or sold and will not offer or sell any Notes other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or agent) for the purposes of their businesses where the issue of the Notes would otherwise constitute a contravention of Section 19 of the Financial Services and Markets Act 2000 (as amended, "**FSMA**") by the Issuer;

(b) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of any Notes in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer; and

(c) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to any Notes in, from or otherwise involving the United Kingdom.

Japan

The Notes have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Law No. 25 of 1948, as amended) (the "**FIEA**"). Each Dealer has represented and agreed and each further Dealer appointed under the Program will be required to represent and agree that it has not offered or sold and will not offer or sell any Notes, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (as defined under Item 5, Paragraph 1, Article 6 of the Foreign Exchange and Foreign Trade Control Law (Law No. 228 of 1949, as amended)) or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of, a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEA and other applicable laws, regulations and ministerial guidelines of Japan.

Singapore

This offering circular has not been and will not be registered as a prospectus with the Monetary Authority of Singapore under the Securities and Futures Act, Chapter 289 of Singapore (the "**SFA**"). Each Dealer represents, warrants and agrees, and each further Dealer appointed under the Program will be required to represent, warrant and agree that it has not offered or sold any Notes or caused the Notes to be made the subject of an invitation for subscription or purchase and will not offer or sell any Notes or cause the Notes to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, and will not circulate or distribute, this offering circular and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Notes, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor under Section 274 of the SFA, (ii) to a relevant person pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA and (where applicable) Regulation 3 of the Securities and Futures (Classes of Investors) Regulations 2018 of Singapore, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the Notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the Notes pursuant to an offer made under Section 275 of the SFA except:

(1) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(2) where no consideration is or will be given for the transfer;

(3) where the transfer is by operation of law;

(4) as specified in Section 276(7) of the SFA; or

(5) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018 of Singapore.

Hong Kong

Each Dealer has represented and agreed and each further Dealer appointed under the Program will be required to represent and agree that:

(a) it has not offered or sold, and will not offer or sell, in Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"), by means of any document, any Notes (except for Notes which are a "structured product" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong) other than (i) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance, or (ii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance; and

(b) it has not issued, or had in its possession for the purposes of issue, and will not issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or document relating to the Notes, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to Notes which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance of Hong Kong and any rules made under that Ordinance.

People's Republic of China

Each Dealer has represented and agreed and each further Dealer appointed under the Program will be required to represent and agree that it has not offered or sold and will not offer or sell the Notes, directly or indirectly, in the PRC (for such purposes, not including Hong Kong, Macau or Taiwan), except as permitted by the securities laws of the PRC.

Canada

Prospective Canadian investors are advised that the information contained within this Offering Circular, and additionally, the relevant final terms or any other offering material relating to the Notes has not been prepared with regard to matters that may be of particular concern to Canadian investors. Accordingly, prospective Canadian investors should consult with their own legal, financial and tax advisers concerning the information contained within this Offering Circular, the relevant final terms or any other offering material relating to the Notes and as to the suitability of an investment in the Notes in their particular circumstances.

The offer and sale of the Notes in Canada will only be made under exemptions from the requirement to file a prospectus with the Canadian securities regulators and will be made only by authorized dealer representatives that are properly registered under the laws of the relevant Canadian jurisdictions or, alternatively, that are entitled to rely on exemptions from the dealer registration requirements in the relevant Canadian jurisdictions.

The Notes may be sold on a private placement basis only to purchasers purchasing, or deemed to be purchasing, as principal that are both accredited investors, as defined in NI 45-106 Prospectus Exemptions ("**NI 45-106**") or subsection 73.3(1) of the Securities Act (Ontario), and that are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the Notes must be made in compliance with the prospectus and registration requirements of applicable Canadian securities laws or in reliance upon available exemptions from, or in a transaction not subject to, such requirements.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this Offering Circular, the relevant final terms or any other offering material constituting an "offering memorandum" under applicable Canadian securities laws (including any amendment to any such documents) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts ("**NI 33-105**"), any offering of Notes under this Offering Circular, and additionally, the relevant terms or any other offering material relating to the Notes, will be conducted in reliance upon an exemption from the disclosure requirements that may otherwise apply to underwriter conflicts of interest under NI 33-105.

Each individual Canadian purchaser resident in Ontario will be deemed to have represented to and agreed with the relevant Issuer and the Dealer that:

(a) such purchaser has been notified: (i) of the requirement to provide information ("**personal information**"') pertaining to the purchaser as required to be disclosed in Schedule I of Form 45-106F1 under NI 45-106 (including its name, address, telephone number and the number and value of any securities purchased), which Form 45-106F1 is required to be filed under NI 45-106; (ii) that such personal information will be delivered to the Ontario Securities Commission (the "**OSC**") in accordance with NI 45-106, and is being collected indirectly by the OSC under the authority granted to it under the securities legislation of Ontario for the purposes of the administration and enforcement of such legislation; and (iii) that the public official in Ontario who can answer questions about the OSC's indirect collection of such personal information is the Administrative Support Clerk at the CSO, Suite 1903, Box 55, 20 Queen Street West, Toronto, Ontario M5H 3S8, Telephone: (416) 593-3684;

(b) such purchaser has authorized the indirect collection of the personal information by the OSC and acknowledges that its name, address, telephone number and other specified information, including the number and aggregate purchase price of the securities it has purchased may be disclosed to other Canadian securities regulatory authorities and may become available to the public in accordance with the requirements of applicable laws; and

(c) by purchasing such securities, each such purchaser consents to the disclosure of such information.

Upon receipt of this Offering Circular, each Canadian purchaser hereby confirms that it has expressly requested that all documents evidencing or relating in any way to the sale of the Notes described herein (including for greater certainty any purchase confirmation or any notice) be drawn up in the English language only. Par la réception de cette prospectus de base, chaque acheteur canadien confirme par les présentes qu'il a expressément exigé que tous les documents faisant foi ou se rapportant de quelque manière que ce soit à la vente des valeurs mobilières décrites aux présentes (incluant, pour plus de certitude, toute confirmation d'achat ou tout avis) soient rédigés en anglais seulement.

Germany

Each Dealer has represented and agreed that the Notes have not been and will not be offered, sold or publicly promoted or advertised in the Federal Republic of Germany other than in compliance with the German Securities Sale Prospectus Act (*Wertpaper-Verkaufsprospektgesetz*) of September 9, 1998, as amended, or any other laws applicable in the Federal Republic of Germany.

Korea

Each Dealer has represented and agreed, and each further Dealer appointed under the Program will be required to represent and agree, that no Notes have been or will be offered, sold, delivered or transferred, directly or indirectly, in Korea or to, or for the account or benefit of, any Korean resident (as such term is defined in the Foreign Exchange Transaction Act of Korea and the Enforcement Decree thereof) for a period of one year from the date of issuance of the Notes, except (i) in the case where, pursuant to Article 2-2-2, Paragraph 2, Item 3 of the Regulations on the Issuance of Securities and Public Disclosure of Korea, if the Notes are issued as straight bonds other than equity-linked bonds, such as convertible bonds, bonds with warrants and exchangeable bonds, the Notes may be sold, delivered or transferred between or among Korean Qualified Institutional Investors as specified in Article 2-2, Paragraph 2, Item 4 of the above-mentioned regulations, provided that all of the following requirements are satisfied: (1) the Notes shall be issued in a currency other than the Won and the principal and interest shall be paid in a currency other than the Won, (2) at least 80% of the aggregate issuance amount of the Notes shall be allocated to those other than Korean residents (which applies only to the Notes acquired from the Issuer or any underwriter at the time of issuance), (3) the Notes shall be those listed on a major overseas securities market specified by the governor of the FSS, those registered with or reported to a foreign financial investment supervisory agency of the country in which a major overseas market is established, or those for which any other procedure that may be deemed a public offering is completed, (4) measures shall be taken to state the condition that the Notes shall not be transferred to any Korean resident other than Korean Qualified Institutional Investors at the time of issuance or within one year from the date of issuance of the Notes on the face of such Notes (limited to cases where any physical instrument is issued), the underwriting agreement, subscription agreement or offering document and (5) the Issuer and the Dealer(s) (limited to cases where a Dealer is appointed) shall take measures under foregoing items (1) through (4) and the Issuer and the Dealer(s) shall severally or jointly preserve evidential documents in relation thereto; or (ii) as otherwise permitted by applicable Korean laws and regulations.

Each Dealer has undertaken and each further Dealer appointed under the Program will be required to undertake to ensure that any securities dealer to which it sells the Notes confirms that it is purchasing such Notes as principal and agrees with such Dealer that it will comply with the restrictions described above.

Switzerland

The offering circular is not intended to constitute an offer or solicitation to purchase or invest in the Notes described herein. The Notes may not be publicly offered, sold or advertised, directly or indirectly, in, into or from Switzerland and will not be listed on the SIX Swiss Exchange or on any other exchange or regulated trading facility in Switzerland. Neither the offering circular nor any other offering or marketing material relating to the Notes constitutes a prospectus as such term is understood pursuant to article 652a or article 1156 of the Swiss Code of Obligations and neither the offering circular nor any other offering or marketing material relating to the Notes may be publicly distributed or otherwise made publicly available in Switzerland.

General

Each Dealer has agreed and each further Dealer appointed under the Program will be required to agree that it will (to the best of its knowledge and belief) comply with all applicable securities laws and regulations in force in any jurisdiction in which it purchases, offers, sells or delivers Notes or possesses or distributes this Offering Circular and will obtain any consent, approval or permission required by it for the purchase, offer, sale or delivery by it of Notes under the laws and regulations in force in any jurisdiction to which it is subject or in which it makes such purchases, offers, sales or deliveries and neither the Issuer nor any other Dealer shall have any responsibility therefor.

Neither the Issuer nor any of the Dealers represents that Notes may at any time lawfully be sold in compliance with any applicable registration or other requirements in any jurisdiction, or pursuant to any exemption available thereunder, or assumes any responsibility for facilitating such sale.

With regard to each Tranche, the relevant Dealer will be required to comply with such other additional restrictions as the Issuer and the relevant Dealer shall agree and as shall be set out in the applicable Pricing Supplement.

GENERAL INFORMATION

Authorization

The establishment of the Program and each issuance of any Notes thereunder have been duly authorized by the resolutions of the Board of Directors of the Issuer dated December 21, 2009. Each issue of Notes under the Program will be authorized by the Board of Directors of the Issuer at the time of issue or at a meeting held annually to approve the issue of Notes to be issued in the following fiscal year.

Listing of Notes on the SGX-ST

Approval in-principle has been received from the SGX-ST in connection with the Program and application will be made for the listing and quotation of any Notes that may be issued under the Program which are agreed, at or prior to the time of issue thereof, to be so listed and quoted on the SGX-ST. Such permission will be granted when such Notes have been admitted for listing and quotation on the SGX-ST. For so long as any Notes are listed on the SGX-ST and the rules of the SGX-ST so require, such Notes, if traded on the SGX-ST, will be traded in a minimum board lot size of S$200,000 (or its equivalent in foreign currencies).

Documents Available

From the date hereof and so long as Notes are capable of being issued under the Program, copies of the following documents will, when published, be available from the registered office of the Issuer and from the specified office of the Paying Agent for the time being in London:

(i) the Articles of Incorporation (together with English translations) of the Issuer;

(ii) the auditors' report and the audited consolidated financial statements of the Issuer as of and for the years ended December 31, 2017, 2018 and 2019;

(iii) the most recently published audited consolidated and (if applicable) the most recently published interim financial statements of the Issuer;

(iv) the Program Agreement, the Agency Agreement and any supplements and amendments thereto, the forms of the Global Notes, the Notes in definitive form, the Receipts, the Coupons and the Talons;

(v) a copy of this offering circular;

(vi) any future offering circulars, prospectuses, information memoranda and supplements including Pricing Supplements (except that a Pricing Supplement relating to an unlisted Note will only be available for inspection by a holder of such Note and such holder must produce evidence satisfactory to the Issuer and the Paying Agent as to its holding of Notes and identity) to this offering circular and any other documents incorporated herein or therein by reference; and

(vii) in the case of each issue of listed Notes subscribed pursuant to a subscription agreement, the subscription agreement (or equivalent document).

Clearing Systems

The Notes have been accepted for clearance through Euroclear and Clearstream. The appropriate Common Code and ISIN for each Tranche of Notes allocated by Euroclear and Clearstream will be specified in the applicable Pricing Supplement. The Bank may also apply to have the Notes accepted for clearance through the CMU Service. The relevant CMU instrument number will be specified in the applicable Pricing Supplement. For persons seeking to hold a beneficial interest in the CMU Notes held in a global certificate through Euroclear or Clearstream, such persons will hold their interests through an account opened and held by Euroclear or Clearstream with HKMA as the CMU operator. In addition, the Issuer may make an application for any Notes in registered form to be accepted for trading in book-entry form by DTC. The CUSIP and/or CINS numbers (if any) for each Tranche of Registered Notes, together with the relevant ISIN and common code, will be specified in the applicable Pricing Supplement. If the Notes are to clear through an additional or alternative clearing system the appropriate information will be specified in the applicable Pricing Supplement.

Independent Auditors

The consolidated financial statements of the Bank as of and for the years ended December 31, 2017, 2018 and 2019 included in this offering circular have been audited by KPMG Samjong Accounting Corp., independent auditors, as stated in their reports appearing herein.

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KPMG SAMJONG

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Independent Auditors' Report

To the Board of Directors and Stockholder of
Shinhan Bank:

Opinion

We have audited the consolidated financial statements of Shinhan Bank and its subsidiaries ("the Group"), which comprise the consolidated statements of financial position as of December 31, 2019 and 2018, the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2019 and 2018, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing (KSAs). Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Matter

The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with K-IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with KSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with KSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

- Evaluate the appropriateness of accounting policies used in the preparation of the consolidated financial statements and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

KPMG Samjong Accounting Corp.

KPMG Samjong Accounting Corp.
Seoul, Korea
March 4, 2020

This report is effective as of March 4, 2020, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

SHINHAN BANK AND SUBSIDIARIES

Consolidated Statements of Financial Position

As of December 31, 2019 and 2018

(In millions of won)	Notes		December 31, 2019	December 31, 2018
Assets				
Cash and due from banks	3,6,9,39,40	₩	24,049,832	13,150,277
Securities at fair value through profit or loss	3,7,40,42		18,716,147	15,612,433
Derivative assets	3,8,40,42		2,101,993	1,484,458
Loans at amortized cost	3,9,18,40,42		268,172,264	251,233,806
Loans at fair value through profit or loss	3,9		868,991	645,237
Securities at fair value through other comprehensive income	3,10,18,42		40,655,905	31,878,348
Securities at amortized cost	3,10,18,42		20,251,888	16,824,400
Property and equipment	5,11,12,17,18		2,465,289	2,014,412
Intangible assets	5,13		656,349	316,229
Investments in associates	14		128,179	109,742
Investment properties	5,15		635,520	571,293
Current tax assets	36		31,312	43,026
Deferred tax assets	36		243,104	222,766
Other assets	3,9,16,40,43		13,734,418	14,409,627
Non-current assets held for sale	17		11,853	7,561
Total assets		₩	392,723,044	348,523,615
Liabilities				
Deposits	3,19,40	₩	287,615,269	257,892,724
Financial liabilities at fair value through profit or loss	3,20		508,081	479,559
Derivative liabilities	3,8,40,42		1,893,832	1,771,585
Borrowings	3,21,39,40		17,325,884	16,154,821
Debt securities issued	3,22,39		38,029,868	31,899,266
Defined benefit liabilities	23		56,168	70,649
Provisions	24,38,40		269,065	284,716
Current tax liabilities	36		398,629	319,428
Deferred tax liabilities	36		30,069	23,480
Other liabilities	3,12,25,40,43		20,503,064	15,434,848
Total liabilities			366,629,929	324,331,076
Equity				
Capital stock	26		7,928,078	7,928,078
Hybrid bonds	26		997,987	698,660
Capital surplus	26		403,164	403,164
Capital adjustments	26,36		(2,480)	646
Accumulated other comprehensive loss	26,36		(403,031)	(606,697)
Retained earnings	26,27		17,162,995	15,762,751
Total equity attributable to equity holder of Shinhan Bank			26,086,713	24,186,602
Non-controlling interests	26		6,402	5,937
Total equity			26,093,115	24,192,539
Total liabilities and equity		₩	392,723,044	348,523,615

See accompanying notes to the consolidated financial statements.

SHINHAN BANK AND SUBSIDIARIES

Consolidated Statements of Comprehensive Income

For the years ended December 31, 2019 and 2018

(In millions of won)	**Notes**		**2019**	**2018**
Interest income		₩	10,654,732	9,596,725
Financial assets at fair value through profit or loss			306,528	234,031
Financial assets at fair value through other comprehensive income and amortized cost			10,348,204	9,362,694
Interest expense			(4,782,945)	(4,010,731)
Net interest income	3,5,28,40,42		5,871,787	5,585,994
Fees and commission income			1,367,547	1,257,752
Fees and commission expense			(250,155)	(221,219)
Net fees and commission income	3,5,29,40,42		1,117,392	1,036,533
Dividend income	30,42		14,955	15,662
Net gain on financial assets at fair value through profit or loss	31		233,897	358,511
Net foreign currencies transaction gain			317,965	141,745
Net gain on disposal of financial asset at fair value through other comprehensive income	10		107,633	16,387
Provision for credit loss allowance	3,9,40		(376,868)	(243,139)
General and administrative expenses	32,40		(3,142,406)	(3,061,786)
Net other operating expenses	5,34,40		(881,052)	(685,221)
Operating income			3,263,303	3,164,686
Net non-operating expenses	5,35		(185,630)	(17,305)
Share of loss of associates	5,14		(763)	(977)
Profit before income tax	5		3,076,910	3,146,404
Income tax expense	5,36		(747,642)	(867,042)
Profit for the year	5,27		2,329,268	2,279,362

SHINHAN BANK AND SUBSIDIARIES

Consolidated Statements of Comprehensive Income (Continued)

For the years ended December 31, 2019 and 2018

(In millions of won, except for earnings per share)	Notes		2019	2018
Other comprehensive income (loss) for the year:				
Items that are or may be reclassified subsequently to profit or loss				
Foreign currency translation differences for foreign operations			97,600	21,299
Unrealized net change in fair value of financial assets at fair value through other comprehensive income			117,219	87,074
Share of other comprehensive income (loss) of associates			3,305	(1,754)
			218,124	106,619
Items that will not be reclassified subsequently to profit or loss				
Remeasurements of defined benefit plans			(27,712)	(70,399)
Unrealized net change in fair value of financial assets at fair value through other comprehensive income			7,985	17,670
Share of other comprehensive income of associates			-	14
			(19,727)	(52,715)
Other comprehensive income for the year, net of income tax	3,26,36		198,397	53,904
Total comprehensive income for the year		₩	2,527,665	2,333,266
Profit attributable to:	5			
Equity holder of Shinhan Bank		₩	2,329,192	2,279,049
Non-controlling interests			76	313
Profit for the year		₩	2,329,268	2,279,362
Total comprehensive income attributable to:				
Equity holder of Shinhan Bank		₩	2,527,200	2,332,943
Non-controlling interests			465	323
Total comprehensive income for the year		₩	2,527,665	2,333,266
Earnings per share:	37			
Basic and diluted earnings per share in won		₩	1,448	1,421

See accompanying notes to the consolidated financial statements.

SHINHAN BANK AND SUBSIDIARIES

Consolidated Statements of Changes in Equity

For the year ended December 31, 2018

(In millions of won)		Attributable to equity holder of Shinhan Bank								
		Capital stock	**Hybrid bonds**	**Capital surplus**	**Capital adjustments**	**Accumulated other comprehensive income (loss)**	**Retained earnings**	**Sub-total**	**Non-controlling interests**	**Total**
Balance at January 1, 2018	₩	7,928,078	668,938	403,164	(3,307)	(663,793)	14,052,132	22,385,212	4,880	22,390,092
Total comprehensive income (loss), net of income tax										
Profit for the year		-	-	-	-	-	2,279,049	2,279,049	313	2,279,362
Foreign currency translation differences for foreign operations		-	-	-	-	21,277	-	21,277	22	21,299
Unrealized net changes in fair values of available-for-sale financial assets		-	-	-	-	107,944	(3,189)	104,755	(11)	104,744
Share of other comprehensive loss of associates		-	-	-	-	(1,727)	(13)	(1,740)	-	(1,740)
Remeasurements of defined benefit plans		-	-	-	-	(70,398)	-	(70,398)	(1)	(70,399)
Total comprehensive income for the year		-	-	-	-	57,096	2,275,847	2,332,943	323	2,333,266
Transactions with owners, recognized directly in equity										
Annual dividends to equity holder		-	-	-	-	-	(540,000)	(540,000)	-	(540,000)
Dividends to hybrid bond holders		-	-	-	-	-	(25,228)	(25,228)	-	(25,228)
Issuance of hybrid bonds		-	199,547	-	-	-	-	199,547	-	199,547
Redemption of hybrid bonds		-	(169,825)	-	(175)	-	-	(170,000)	-	(170,000)
Share-based payment transactions		-	-	-	4,128	-	-	4,128	-	4,128
Capital investment in subsidiaries		-	-	-	-	-	-	-	734	734
Total transactions with owners		-	29,722	-	3,953	-	(565,228)	(531,553)	734	(530,819)
Balance at December 31, 2018	₩	7,928,078	698,660	403,164	646	(606,697)	15,762,751	24,186,602	5,937	24,192,539

See accompanying notes to the consolidated financial statements.

SHINHAN BANK AND SUBSIDIARIES

Consolidated Statements of Changes in Equity (Continued)

For the year ended December 31, 2019

(In millions of won)

		Attributable to equity holder of Shinhan Bank								
		Capital stock	Hybrid bonds	Capital surplus	Capital adjustments	Accumulated other comprehensive income (loss)	Retained earnings	Sub-total	Non-controlling interests	Total
Balance at January 1, 2019	₩	7,928,078	698,660	403,164	646	(606,697)	15,762,751	24,186,602	5,937	24,192,539
Total comprehensive income (loss), net of income tax										
Profit for the year		-	-	-	-	-	2,329,192	2,329,192	76	2,329,268
Foreign currency translation differences for foreign operations		-	-	-	-	97,223	-	97,223	377	97,600
Unrealized net changes in fair values of financial assets at fair value through other comprehensive income		-	-	-	-	130,851	(5,658)	125,193	11	125,204
Share of other comprehensive income of associates		-	-	-	-	3,305	-	3,305	-	3,305
Remeasurements of defined benefit plans		-	-	-	-	(27,713)	-	(27,713)	1	(27,712)
Total comprehensive income for the year		-	-	-	-	203,666	2,323,534	2,527,200	465	2,527,665
Transactions with owners, recognized directly in equity										
Annual dividends to equity holder		-	-	-	-	-	(890,000)	(890,000)	-	(890,000)
Dividends to hybrid bond holders		-	-	-	-	-	(33,115)	(33,115)	-	(33,115)
Issuance of hybrid bonds		-	299,327	-	-	-	-	299,327	-	299,327
Share-based payment transactions		-	-	-	(3,301)	-	-	(3,301)	-	(3,301)
Capital investment in subsidiaries		-	-	-	175	-	(175)	-	-	-
Total transactions with owners		-	299,327	-	(3,126)	-	(923,290)	(627,089)	-	(627,089)
Balance at December 31, 2019	₩	7,928,078	997,987	403,164	(2,480)	(403,031)	17,162,995	26,086,713	6,402	26,093,115

See accompanying notes to the consolidated financial statements.

SHINHAN BANK AND SUBSIDIARIES

Consolidated Statements of Cash Flows

For the years ended December 31, 2019 and 2018

(In millions of won)		2019	2018
Cash flows from operating activities			
Profit before income tax	₩	3,076,910	3,146,404
Adjustments for:			
Interest income		(10,654,732)	(9,596,725)
Interest expense		4,782,945	4,010,731
Dividend income		(14,955)	(15,662)
Net gain on financial assets at fair value through profit or loss		(74,768)	(253,832)
Net non-cash foreign currencies transaction loss (gain)		(3,797)	129,495
Net gain on sale of financial assets at fair value through other comprehensive income		(107,633)	(15,288)
Provision for credit loss allowance		376,868	245,218
Non-cash employee benefits		139,701	109,500
Depreciation and amortization		403,861	196,027
Net non-cash other operating expenses (income)		198,757	(40,419)
Share of loss of associates		763	977
Net non-cash non-operating expenses (income)		143,390	(5,828)
		(4,809,600)	(5,235,806)
Changes in assets and liabilities:			
Due from banks		(10,344,562)	6,571,282
Securities at fair value through profit or loss		(2,398,378)	(2,192,359)
Derivative assets		1,474,605	2,748,118
Loans at amortized cost		(16,870,906)	(22,536,002)
Loans at fair value through profit or loss		(222,565)	(34,732)
Other assets		836,198	(4,910,938)
Deposits		29,305,622	16,408,681
Financial liabilities at fair value through profit or loss		(60,255)	27,561
Derivative liabilities		(1,529,554)	(2,679,631)
Defined benefit liabilities		(181,499)	(94,396)
Provisions		(6,995)	19,817
Other liabilities		4,057,698	734,212
		4,059,409	(5,938,387)
Income tax paid		(767,539)	(509,165)
Interest received		10,705,948	9,527,836
Interest paid		(4,673,694)	(4,143,026)
Dividends received		15,330	18,435
Net cash provided by (used in) operating activities		7,606,764	(3,133,709)

SHINHAN BANK AND SUBSIDIARIES
Consolidated Statements of Cash Flows (Continued)
For the years ended December 31, 2019 and 2018

(In millions of won)		2019	2018
Cash flows from investing activities			
Proceeds from sale of securities at fair value through profit or loss	₩	756,399	925,774
Acquisition of securities at fair value through profit or loss		(1,391,004)	(925,116)
Proceeds from sale of securities at fair value through other comprehensive income		30,323,375	23,102,529
Acquisition of securities at fair value through other comprehensive income		(38,987,337)	(23,603,810)
Proceeds from sale of securities at amortized cost		6,394,739	1,846,933
Acquisition of securities at amortized cost		(9,692,417)	(3,751,191)
Proceeds from sale of property and equipment		13,110	35,907
Acquisition of property and equipment		(189,710)	(90,625)
Proceeds from sale of intangible assets		10,518	2,648
Acquisition of intangible assets		(222,006)	(93,282)
Proceeds from sale of investments in associates		5,082	10,944
Acquisition of investments in associates		(15,253)	(21,377)
Proceeds from sale of investment properties		-	15,274
Acquisition of investment properties		(2,771)	(1,132)
Proceeds from sale of non-current assets held for sale		137	3,175
Proceeds from sale of other assets		793,935	945,794
Acquisition of other assets		(787,462)	(944,869)
Net cash used in investing activities		(12,990,665)	(2,542,424)
Cash flows from financing activities			
Proceeds from borrowings, net		943,540	1,134,388
Proceeds from issuance of debt securities		17,697,533	14,749,462
Repayment of debt securities		(12,047,639)	(8,271,552)
Dividends paid		(925,712)	(563,999)
Issuance of hybrid bonds		299,327	199,547
Redemption of hybrid bonds		-	(170,000)
Increase of other liabilities		142,537	95,415
Decrease of other liabilities		(348,417)	(94,621)
Contribution from non-controlling interests		-	734
Net cash provided by financing activities		5,761,168	7,079,374
Effect of exchange rate fluctuations on cash and cash equivalents held		28,297	(29,174)
Net increase in cash and cash equivalents		405,565	1,374,067
Cash and cash equivalents at beginning of the year (Note 39)		6,704,953	5,330,886
Cash and cash equivalents at end of the year (Note 39)	₩	7,110,517	6,704,953

See accompanying notes to the consolidated financial statements.

1. Reporting entity

Shinhan Bank (the "Bank"), the controlling company, is headquartered at 20, Sejong-daero 9-gil, Jung-gu, Seoul, Republic of Korea. The accompanying consolidated financial statements consist of the Bank and subsidiaries (collectively referred to as "the Group"), and equity interests in associates and joint ventures of the Group.

(a) Controlling company

The Bank was established on October 1, 1943 under the name of Chohung Bank, through the merger of Hanseung Bank and Dongil Bank, which were established on February 19, 1897 and August 8, 1906, respectively, to engage in commercial banking and trust operations.

The Bank acquired Chungbuk Bank and Kangwon Bank in 1999, and the former Shinhan Bank on April 1, 2006, and subsequently changed its name to Shinhan Bank. As of December 31, 2019, the Bank has 1,585,615,506 outstanding common shares with par value of ₩7,928,078 million which is 100% owned Shinhan Financial Group Co., Ltd. ("Shinhan Financial Group"). As of December 31, 2019, the Bank operates through 737 domestic branches, 139 depository offices, 29 premises and 14 overseas branches.

(b) Subsidiaries included in consolidation

Details of ownerships in subsidiaries as of December 31, 2019 and 2018 were as follows:

Subsidiaries	Location	Fiscal year-end	Sector	Ownership (%) December 31, 2019	Ownership (%) December 31, 2018
Shinhan Asia	Hong Kong	December	Wholesale finance	99.99	99.99
Shinhan America	U.S.A	December	Banking	100.00	100.00
Shinhan Europe	Germany	December	Banking	100.00	100.00
Shinhan Cambodia	Cambodia	December	Banking	97.50	97.50
Shinhan Kazakhstan	Kazakhstan	December	Banking	100.00	100.00
Shinhan Canada	Canada	December	Banking	100.00	100.00
Shinhan China	China	December	Banking	100.00	100.00
Shinhan Japan	Japan	March	Banking	100.00	100.00
Shinhan Vietnam	Vietnam	December	Banking	100.00	100.00
Shinhan Mexico	Mexico	December	Banking	99.99	99.99
Shinhan Indonesia	Indonesia	December	Banking	99.00	99.00

i) Shinhan Asia Ltd.

Shinhan Asia Ltd. ("Shinhan Asia") engages in merchant banking activities in Hong Kong. As of December 31, 2019, Shinhan Asia's capital stock amounted to USD 100 million.

ii) Shinhan Bank America

Shinhan Bank America ("Shinhan America") was established on March 24, 2003 through the merger of Chohung Bank of New York and California Chohung Bank. As a result of rights offering during the year ended December 31, 2018, Shinhan America's capital stock amounted to USD 173 million as of December 31, 2019.

iii) Shinhan Bank Europe GmbH

Shinhan Bank Europe GmbH ("Shinhan Europe") was established in 1994. As of December 31, 2019, Shinhan Europe's capital stock amounted to EUR 63 million by capital increase without consideration.

1. Reporting entity (continued)

(b) Subsidiaries included in consolidation (continued)

iv) Shinhan Bank Cambodia

Shinhan Cambodia Bank PLC ("Shinhan Cambodia") was established on October 15, 2007. Shinhan Bank Cambodia was renamed from Shinhan Cambodia Bank PLC in the year ended December 31, 2018. As a result of rights offering during the year ended December 31, 2018, Shinhan Cambodia's capital stock amounted to USD 75 million as of December 31, 2019.

v) Shinhan Bank Kazakhstan Limited

Shinhan Bank Kazakhstan Limited ("Shinhan Kazakhstan") was established on December 16, 2008. As of December 31, 2019, Shinhan Kazakhstan's capital stock amounted to KZT 10,029 million.

vi) Shinhan Bank Canada

Shinhan Bank Canada ("Shinhan Canada") was established on March 9, 2009. As of December 31, 2019, Shinhan Canada's capital stock amounted to CAD 80 million.

vii) Shinhan Bank China Limited

Shinhan Bank China Limited ("Shinhan China") was established on May 12, 2008. As of December 31, 2019, Shinhan China's capital stock amounted to CNY 2,000 million.

viii) Shinhan Bank Japan

Shinhan Bank Japan ("Shinhan Japan") was established on September 14, 2009. As a result of rights offering during the year ended December 31, 2018, Shinhan Japan's capital stock amounted to JPY 17,500 million as of December 31, 2019.

ix) Shinhan Bank Vietnam Ltd.

Shinhan Bank Vietnam Ltd. ("Shinhan Vietnam") was established on November 16, 2009 and merged with Shinhan Vina Bank on November 28, 2011. On December 17, 2017, Shinhan Vietnam acquired the retail business of ANZ Vietnam. As a result of rights offering during the year ended December 31, 2019, Shinhan Vietnam's capital stock amounted to VND 5,709,900 million as of December 31, 2019.

x) Banco Shinhan de Mexico

Banco Shinhan de Mexico ("Shinhan Mexico") was established on October 12, 2015 for obtaining the authorization of banking business. As a result of the rights offering during the year ended December 31, 2018, Shinhan Mexico's issued capital stock amounted to MXN 1,583 million as of December 31, 2019.

xi) PT Bank Shinhan Indonesia

On November 30, 2015, the Bank acquired 97.76% of voting share and obtained the control of PT Bank Metro Express, which was established on September 8, 1967 and is engaged in the banking business. PT Bank Metro Express was renamed as PT Bank Shinhan Indonesia ("Shinhan Indonesia") in 2016 and merged PT Centratama Nasional Bank, a former subsidiary of the Bank, on December 6, 2016. As of December 31, 2019, Shinhan Indonesia's capital stock amounted to IDR 944,278 million.

1. **Reporting entity (continued)**

(c) Subsidiaries included in consolidation (continued)

In addition, structured entities included in consolidation as of December 31, 2019 were as follows:

Structured entities	Location	Fiscal period-end (month)
MPC Yulchon Green 1st	Korea	3 / 6 / 9 / 12
MPC Yulchon 2nd	Korea	3 / 6 / 9 / 12
MPC Yulchon 1st	Korea	3 / 6 / 9 / 12
Shinhan-S-Russell Co., Ltd.	Korea	3 / 6 / 9 / 12
Sunny More 5th Co., Ltd.	Korea	2 / 5 / 8 / 11
Sunny Dream 7th Co., Ltd.	Korea	10
Sunny Russell 8th Co., Ltd.	Korea	12
Shinhan-Daesung Contents Fund	Korea	12
Sunny Russell 1st Co., Ltd.	Korea	2
Sunny Russell 4th L.L.C	Korea	12
Sunny Russell 5th Co., Ltd.	Korea	12
S-smart 9th Co., Ltd.	Korea	12
Sunny Smart 2nd Co., Ltd.	Korea	12
Tiger Eyes 3rd Co., Ltd.	Korea	12
Sunny Smart 5th Co., Ltd.	Korea	2 / 5 / 8 / 11
Tiger Eyes 1st Co., Ltd.	Korea	1 / 4 / 7 / 10
S-solution 2nd Co., Ltd.	Korea	2 / 5 / 8 / 11
S-solution 3rd Co., Ltd.	Korea	2 / 5 / 8 / 11
Shinhan Display 1st Co., Ltd.	Korea	1 / 4 / 7 / 10
S-solution 9th Co., Ltd.	Korea	10
SH inno 1st Co., Ltd.	Korea	3 / 6 / 9 / 12
Sunny solution 2nd Co., Ltd.	Korea	11
Sunny Dream 1st Co., Ltd.	Korea	7
Sunny solution 3rd Co., Ltd.	Korea	1 / 4 / 7 / 10
Shinhan Display 2nd Co., Ltd.	Korea	1 / 4 / 7 / 10
Sunny solution 4th Co., Ltd.	Korea	3 / 6 / 9 / 12
Redefine Unjung Co., Ltd.	Korea	1 / 4 / 7 / 10
Sunny solution 9th Co., Ltd.	Korea	2 / 5 / 8 / 11
Sunny solution 10th Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB portfolio a 1st Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB portfolio a 3rd Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB portfolio a 4th Co., Ltd.	Korea	1 / 4 / 7 / 10
S-redefine 3rd Co., Ltd.	Korea	7
S-Tiger 2nd Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB harim Co., Ltd.	Korea	3 / 6 / 9 / 12
Maestro Werye 1st Co., Ltd.	Korea	3 / 6 / 9 / 12
S-redefine 4th Co., Ltd.	Korea	9
Rich gate 1st Co., Ltd.	Korea	3 / 6 / 9 / 12
Grand bene Co., Ltd.	Korea	3 / 6 / 9 / 12
S redefine 7th Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB han 1st corp.	Korea	3 / 6 / 9 / 12
Rich gate 9th corp.	Korea	3 / 6 / 9 / 12
Rich gate 11th corp.	Korea	3 / 6 / 9 / 12
Sunny Financial 10th Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB sol 1st corp.	Korea	2 / 5 / 8 / 11
Rich gate 8th corp.	Korea	3 / 6 / 9 / 12
Rich gate 12th corp.	Korea	1 / 4 / 7 / 10
Rich gate 13th corp.	Korea	2 / 5 / 8 / 11
Maestro ER Co., Ltd.	Korea	3 / 6 / 9 / 12

1. Reporting entity (continued)

(c) Subsidiaries included in consolidation (continued)

Structured entities	Location	Fiscal period-end (month)
GIB CSI Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB DM Co., Ltd.	Korea	3 / 6 / 9 / 12
Rich gate 14th corp.	Korea	3 / 6 / 9 / 12
Maestro mirae Co., Ltd.	Korea	3 / 6 / 9 / 12
MAESTRO ST Co., Ltd.	Korea	12
GIB time 1st	Korea	1 / 4 / 7 / 10
AR plus 1st	Korea	3 / 6 / 9 / 12
MAESTRO SP Co., Ltd.	Korea	1 / 4 / 7 / 10
MAESTRO BIZON Co., Ltd.	Korea	2 / 5 / 8 / 11
GIB AIR Co., Ltd.	Korea	2 / 5 / 8 / 11
S-Tiger 5th Co., Ltd.	Korea	2 / 5 / 8 / 11
MAESTRO S.I Co., Ltd.	Korea	2 / 5 / 8 / 11
S REDIFINE 10th Co., Ltd.	Korea	1 / 4 / 7 / 10
S-Tiger 6th Co., Ltd.	Korea	3 / 6 / 9 / 12
Maestro gongdeok Co., Ltd.	Korea	3 / 6 / 9 / 12
Maestro LEC Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB Palace Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB DAEMYUNG 1st Co., Ltd.	Korea	1 / 4 / 7 / 10
S-Tiger 8th Co., Ltd.	Korea	1 / 4 / 7 / 10
MAESTRO S.A Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB YOUNGSAN 1st Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB YOUNGSAN 2nd Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB hoban 1st	Korea	12
GIB LAB 2nd Co., Ltd.	Korea	9
Development Trust	Korea	12
Non-specified Money Trust	Korea	12
Old-age Living Pension Trust	Korea	12
New-Personal Pension Trust	Korea	12
Personal Pension Trust	Korea	12
Retirement Trust	Korea	12
New Old-age Living Pension Trust	Korea	12
Pension Trust	Korea	12
Household Money Trust (Shinhan)	Korea	12
Corporation Money Trust (Shinhan)	Korea	12
Shinhan BNPP Private Corporate 25th	Korea	1

The Group consolidates a structured entity when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to most significantly affect those returns through its power over the structured entity based on the terms in the agreement relating to the establishment of the structured entity. For consolidated structured entities, the Group recognizes non-controlling interests related to the structured entity as liabilities in the consolidated statement of financial position.

As of December 31, 2019, the Group provides Asset Backed Commercial Paper (ABCP) purchase agreement amounting to ₩3,766,311 million to the structured entities described above.

1. Reporting entity (continued)

(d) Changes in subsidiaries

	Subsidiaries
Newly included subsidiaries during the year ended December 31, 2019	GIB han 1st corp.
	Rich gate 9th corp.
	Rich gate 11th corp.
	Sunny Financial 10th Co., Ltd.
	GIB sol 1st corp.
	Rich gate 8th corp.
	Rich gate 12th corp.
	Rich gate 13th corp.
	Maestro ER Co., Ltd.
	GIB CSI Co., Ltd.
	GIB DM Co., Ltd.
	Rich gate 14th corp.
	Maestro mirae Co., Ltd.
	MAESTRO ST Co., Ltd.
	GIB time 1st
	AR plus 1st
	MAESTRO SP Co., Ltd.
	MAESTRO BIZON Co., Ltd.
	GIB AIR Co., Ltd.
	S-Tiger 5th Co., Ltd.
	MAESTRO S.I Co., Ltd.
	S REDIFINE 10th Co., Ltd.
	S-Tiger 6th Co., Ltd.
	Maestro gongdeok Co., Ltd.
	Maestro LEC Co., Ltd.
	GIB Palace Co., Ltd.
	Consus SGrail Specialized Private Special Asset Investment Trust
	GIB DAEMYUNG 1st Co., Ltd.
	S-Tiger 8th Co., Ltd.
	MAESTRO S.A Co., Ltd.
	GIB YOUNGSAN 1st Co., Ltd.
	GIB YOUNGSAN 2nd Co., Ltd.
	GIB hoban 1st
	GIB LAB 2nd Co., Ltd.

1. Reporting entity (continued)

(d) Changes in subsidiaries (continued)

	Subsidiaries
Excluded subsidiaries during the year ended December 31, 2019	Sunny Financial 1st Co., Ltd.
	Sunny Financial 2nd Co., Ltd.
	Sunny Smart 1st Co., Ltd.
	Sunny Smart 5th Co., Ltd.
	Sunny Smart 6th Co., Ltd.
	Sunny solution 6th Co., Ltd.
	GIB portfolio a 2nd Co., Ltd.
	Sunny Financial 9th Co., Ltd.
	Sunny More 3rd Co., Ltd.
	Sunny More 1st Co., Ltd.
	Sunny More 2nd Co., Ltd.
	Sunny Smart 8th Co., Ltd.
	Sunny More 10th Co., Ltd.
	CGN YULCHON 2nd Co., Ltd.
	Sunny Smart 10th Co., Ltd.
	Sunny solution 4th Co., Ltd.
	Sunny solution 5th Co., Ltd.
	Sunny solution 7th Co., Ltd.
	S-Nuri 1st Co., Ltd.
	GPS 11th Ltd.
	Sunny Dream 4th L.L.C
	Sunny Dream 9th L.L.C
	Sunny Dream 5th Co., Ltd.
	Sunny Russell 3rd L.L.C
	Sunny Russell 6th Co., Ltd.
	Sunny smart 3rd Co., Ltd.
	Shinhan serveone 1st Co., Ltd.
	Sunny solution 1st Co., Ltd.
	GIB portfolio a 5th Co., Ltd.
	GIB dochuck Co., Ltd.
	Consus SGrail Specialized Private Special Asset Investment Trust

2. Significant accounting policies

(a) Statement of compliance

The consolidated financial statements have been prepared in accordance with Korean International Financial Reporting Standards ("K-IFRS"), as prescribed in *the Act on External Audit of Stock Companies*.

The Group's consolidated financial statements have been prepared in accordance with the accounting policies stated below.

(b) Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis except for the following material items in the consolidated statements of financial position:

- derivative financial instruments are measured at fair value
- financial instruments at fair value through profit or loss ("FVTPL") are measured at fair value
- financial instruments at fair value through other comprehensive income ("FVOCI") are measured at fair value
- share-based payment arrangements are initially measured at fair value on grant date
- changes in fair value attributable to the risk being hedged for financial instruments designated as hedged items in qualifying fair value hedge relationships are recognized in profit or loss
- liabilities for defined benefit plans are recognized as net of the total present value of defined benefit obligations less the fair value of plan assets

(c) Functional and presentation currency

The respective financial statements of the Group entities are prepared in the functional currency of the respective operation. These consolidated financial statements are presented in Korean won, which is the Bank's functional currency and the currency of the primary economic environment in which the Group operates. Subsidiaries whose functional currency is not Korean won were as follows:

Functional currency	Subsidiaries
USD	Shinhan Asia, Shinhan America, Shinhan Cambodia
EUR	Shinhan Europe
KZT	Shinhan Kazakhstan
CAD	Shinhan Canada
CNY	Shinhan China
JPY	Shinhan Japan
VND	Shinhan Vietnam
MXN	Shinhan Mexico
IDR	Shinhan Indonesia

2. Significant accounting policies (continued)

(d) Use of estimates and judgements

The preparation of the consolidated financial statements in conformity with K-IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Information about significant areas of estimation uncertainty and critical judgements in applying accounting policies that have the significant effect on the amount recognized in the consolidated financial statements is described in Note 4.

The Group recognizes credit loss allowance for expected credit losses on debt instruments, loans and receivables that are measured at amortized cost or at FVOCI, loan commitments and financial guarantee contracts upon adoption of K-IFRS No.1109, *'Financial Instruments'*. The measurement of such allowance is determined by techniques, assumptions and input variables used by the Group to measure expected future cash flows of individual financial instruments and to measure expected credit losses in a collective manner. The details of techniques, assumptions and input variables used to measure the credit loss allowance for expected credit losses as of December 31, 2019 are described in Note 3.

(e) Changes in accounting policies

In preparing these consolidated financial statements, the significant judgments made by management in applying the Group's accounting policies and the key sources of estimation uncertainty are the same as those that applied to the consolidated financial statements as of and for the year ended December 31, 2018 except for the application of the revised standard, which applies for the first time on January 1, 2019, as described below. There are other accounting standards that took effect on January 1, 2019, but they have no significant impact on the consolidated financial statements.

a) Amendments to K-IFRS No.1109, *'Financial Instruments'* and K-IFRS No.1107, *'Financial Instruments: Disclosures'*

The interest rate index reform has added an exception that allows hedge accounting to be applied while uncertainty exists. In a hedging relationship, it is assumed that the interest rate index underlying cash flows is not changed by the interest rate index reform when reviewing the occurrence of forecast transaction and the prospective assessment of the hedge effectiveness. For hedges of non-contractually specified interest rate risk components, the requirement that the hedged risk should be separately identifiable applies only at the inception of the hedging relationship. Through the interest rate index reform, this application of exception is ended when the timing and amount of cash flows based on the interest rate index will no longer appear, or the hedging relationship is discontinued. These amendments take effect on January 1, 2020 but have been applied early as early adoption is allowed. A significant interest rate indicator for hedging relationships is LIBOR and CD rates. The subject affected by this amendment is the hedge accounting as disclosed in Note 8.

b) K-IFRS No.1116, *'Leases'*

K-IFRS No.1116, published on May 22, 2017, replaces existing standards including K-IFRS No.1017, '*Leases*', K-IFRS No.2104, '*Determining whether an Arrangement contains a Lease*', K-IFRS No.2015, '*Operating Leases - Incentives*' and K-IFRS No.2027, '*Evaluating the Substance of Transactions Involving the Legal Form of a Lease*'.

The Group has applied K-IFRS No.1116 from the year beginning on January 1, 2019, the date of initial application.

2. Significant accounting policies (continued)

(e) Changes in accounting policies (continued)

At inception of a contract, the Group assessed whether the contract is, or contains, a lease, and identified whether the contract is, or contains, a lease in accordance with K-IFRS No.1116 at the date of initial application.

For a contract that is, or contains, a lease, a lessee or a lessor shall account for each lease component within the contract as a lease separately from non-lease components (hereinafter called 'non-lease components') of the contract.

A lessee shall recognize a lease right-of-use asset, which represents a lessee's right to use an underlying asset (leased asset) for the lease term, and a lease liability, which represents an obligation to make lease payments. However, a lessee may elect not to apply the requirements to short-term leases and leases for which the underlying asset is of low value. Also, the Group used the following practical expedients when applying K-IFRS No.1116 to leases previously classified as operating leases under K-IFRS No.1017.

- Elects not to apply the requirements to recognize lease right-of-use assets and lease liabilities to leases for which the lease term ends within 12 months of the date of initial application.
- Excludes initial direct costs from the measurements of the right-of-use assets at the date of initial application.
- If the contract contains an option to extend or terminate the lease, hindsight is used to determine the lease term.

The comparative consolidated statement of financial position of the Group as of December 31, 2019, and the related consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes are prepared in accordance with K-IFRS No.1116. Also, the comparative consolidated financial statements as of December 31, 2018 and for the year ended December 31, 2018, have not been retrospectively restated according to the transition rules of K-IFRS No.1116.

The details of the right-of-use assets and lease liabilities resulting from the initial application of K-IFRS No.1116 are explained in Notes 12 and 44.

(f) Approval of consolidated financial statements

The consolidated financial statements were authorized for issue by the Board of Directors on February 4, 2020, which will be submitted for approval to the shareholders' meeting on March 25, 2020.

(g) Basis of consolidation

i) Subsidiaries

Subsidiaries are investees controlled by the Group. The Group controls an investee when it is exposed to, or has rights to, variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

If a member of the Group uses accounting policies other than those adopted in the consolidated financial statements for the same transactions and events in similar circumstances, appropriate adjustments are made to its financial statements in preparing the consolidated financial statements.

There is no non-controlling interest in structured entities because the ownership interests in structured entities are shown as liabilities of the Group.

ii) Intra-group transactions eliminated on consolidation

Intra-group balances, transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Intra-group losses are recognized as expense if intra-group losses indicate an impairment that requires recognition in the consolidated financial statements.

2. Significant accounting policies (continued)

(g) Basis of consolidation (continued)

iii) Non-controlling interests

Non-controlling interests in a subsidiary are accounted for separately from the parent's ownership interests in a subsidiary. Each component of net profit or loss and other comprehensive income is attributed to the owners of the parent and non-controlling interest holders, even when the allocation reduces the non-controlling interests balance below zero.

(h) Business combinations

i) Business combinations

A business combination is accounted for by applying the acquisition method, unless it is a combination involving entities or businesses under common control.

Each identifiable asset and liability is measured at its acquisition-date fair value except for below:
- Leases and insurance contracts are required to be classified on the basis of the contractual terms and other factors
- Only those contingent liabilities assumed in a business combination that are a present obligation and can be measured reliably are recognized
- Deferred tax assets or liabilities are recognized and measured in accordance with K-IFRS No.1012, '*Income Taxes*'
- Employee benefit arrangements are recognized and measured in accordance with K-IFRS No.1019, '*Employee Benefits*'
- Indemnification assets are recognized and measured on the same basis as the indemnified liability or asset
- Reacquired rights are measured in accordance with special provisions
- Liabilities or equity instruments related to share-based payment transactions are measured in accordance with the method in K-IFRS No.1102, '*Share-based Payment*'
- Non-current assets held for sale are measured at fair value less costs to sell in accordance with K-IFRS No.1105, '*Non-current Assets Held for Sale and Discontinued Operations*'

As of the acquisition date, non-controlling interests in the acquiree are measured as the non-controlling interests' proportionate share of the acquiree's identifiable net assets.

The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the acquirer, the liabilities incurred by the acquirer to former owners of the acquiree and the equity interests issued by the acquirer. However, any portion of the acquirer's share-based payment awards exchanged for awards held by the acquiree's employee that is included in consideration transferred in the business combination shall be measured in accordance with the method described above rather than at fair value.

Acquisition-related costs are costs the acquirer incurs to effect a business combination. Those costs include finder's fees; advisory, legal, accounting, valuation and other professional or consulting fees; general administrative costs, including the costs of maintaining an internal acquisitions department; and costs of registering and issuing debt and equity securities. Acquisition-related costs, other than those associated with the issue of debt or equity securities, which are recognized in accordance with K-IFRS No.1032, '*Financial Instruments: Presentation*' and K-IFRS No.1109, '*Financial Instruments'*, are expensed in the periods in which the costs are incurred and the services are received.

2. Significant accounting policies (continued)

(h) Business combination (continued)

ii) Goodwill

The Group measures goodwill at the acquisition date as:
- the fair value of the consideration transferred; plus
- the recognized amount of any non-controlling interests in the acquiree; plus
- if the business combination is achieved in stages, the fair value of the pre-existing equity interest in the acquiree; less
- the net recognized amount (generally fair value) of the identifiable assets acquired and liabilities assumed.

When the excess is negative, a bargain purchase gain is recognized immediately in profit or loss.

When the Group additionally acquires non-controlling interest, the Group does not recognize goodwill since the transaction is regarded as equity transaction.

As part of its transition to K-IFRS, the Group elected to restate only those business combinations which occurred on or after January 1, 2010 in accordance with K-IFRS. In respect of acquisitions prior to January 1, 2010, goodwill is included on the basis of its deemed cost, which represents the amount recorded under previous Generally Accepted Accounting Principles (“GAAP”).

(i) Investments in associates

An associate is an entity in which the Group has significant influence, but not control, over the entity’s financial and operating policies. Significant influence is presumed to exist when the Group holds between 20 and 50 percent of the voting power of another entity.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

The investment in an associate and a joint venture is initially recognized at cost, and the carrying amount is increased or decreased to recognize the Group’s share of the profit or loss and changes in equity of the associate and the joint venture after the date of acquisition. Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Intra-group losses are recognized as expense if intra-group losses indicate an impairment that requires recognition in the consolidated financial statements.

If an associate or a joint venture uses accounting policies different from those of the Group for like transactions and events in similar circumstances, appropriate adjustments are made to its financial statements in applying the equity method.

When the Group’s share of losses exceeds its interest in an equity accounted investee, the carrying amount of that interest, including any long-term investments, is reduced to nil and the recognition of further losses is discontinued except to the extent that the Group has an obligation or has to make payments on behalf of the investee for further losses.

2. Significant accounting policies (continued)

(j) Operating segments

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Group's other components, whose operating results are reviewed regularly by the chief operating decision maker to make decisions about resources allocated to each segment and assess its performance, and for which discrete financial information is available.

The segment reporting to a chief executive officer includes items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly general expenses and income tax assets and liabilities. The Group considers the Chief Executive Officer ("CEO") of the Bank as the chief operating decision maker.

(k) Foreign currencies

i) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of the Group at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency using the reporting date's exchange rate. The foreign currency gain or loss on monetary items is the difference between amortized cost in the functional currency at the beginning of the period, adjusted for effective interest and payments during the period, and the amortized cost in foreign currency translated at the exchange rate at the end of the reporting period. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined.

Foreign currency differences arising on retranslation are recognized in profit or loss, except for differences arising on the retranslation of available-for-sale equity instruments, a financial liability designated as a hedging instrument of the net investment in a foreign operation or a qualifying cash flow hedge, which are recognized in other comprehensive income. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

ii) Foreign operations

If the presentation currency of the Group is different from a foreign operation's functional currency, the financial statements of the foreign operation are translated into the presentation currency using the following methods:

The assets and liabilities of foreign operations, whose functional currency is not the currency of a hyperinflationary economy, are translated to presentation currency at exchange rates at the reporting date. The income and expenses of foreign operations are translated to functional currency at exchange rates at the dates of the transactions. Foreign currency differences are recognized in other comprehensive income.

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation are treated as assets and liabilities of the foreign operation and are translated using the exchange rate at the reporting date.

2. Significant accounting policies (continued)

(k) Foreign currencies (continued)

When a foreign operation is disposed of, the relevant amount in the translation is transferred to profit or loss as part of the profit or loss on disposal. On the partial disposal of a subsidiary that includes a foreign operation, the relevant proportion of such cumulative amount is reattributed to non-controlling interest. In any other partial disposal of a foreign operation, the relevant proportion is reclassified to profit or loss.

iii) Net investment in a foreign operation

If the settlement of a monetary item receivable from or payable to a foreign operation is neither planned nor likely in the foreseeable future, then foreign currency differences arising on the item form part of the net investment in the foreign operation and are recognized in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment.

(l) Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits with original maturities of three months or less from the acquisition date that are subject to an insignificant risk of changes in their fair value, and are used by the Group in the management of its short-term commitments. Equity instruments are excluded from cash equivalents unless they are, in substance, cash equivalents, for example in the case of preferred shares acquired within a short period of their maturity and with a specified redemption date. However, the Group's account overdraft is included in borrowings.

(m) Non-derivative financial assets

Financial assets are recognized when the Group becomes a party to the contractual provisions of the instrument. In addition, a regular way purchase or sale (a purchase or sale of a financial asset under a contract whose terms require delivery of the asset within the time frame established generally by regulation or convention in the market concerned) is recognized on the trade date.

A financial asset is measured initially at its fair value plus, for an item not at FVTPL, transaction costs that are directly attributable to its acquisition of the financial asset. Transaction costs on the financial assets at FVTPL that are directly attributable to the acquisition are recognized in profit or loss as incurred.

i) Financial assets designated at FVTPL

Financial assets can be irrevocably designated as measured at FVTPL despite of classification standards stated below, if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise from measuring assets or liabilities or recognizing the gains or losses on them on different bases.

2. Significant accounting policies (continued)

(m) Non-derivative financial assets (continued)

ii) Equity instruments

For the equity instruments that are not held for trading, at initial recognition, the Group may make an irrevocable election to present subsequent changes in fair value in other comprehensive income. Equity instruments that are not classified as financial assets at FVOCI are classified as financial assets at FVTPL.

The Group subsequently measures all equity investments at fair value. Valuation gains or losses of the equity instruments that are classified as financial assets at FVOCI previously recognized as other comprehensive income is not reclassified as profit or loss on derecognition. The Group recognizes dividends in profit or loss when the Group's right to receive payments of the dividend is established.

Valuation gains or losses due to changes in fair value of the financial assets at FVTPL are recognized as gains or losses on financial assets at FVTPL. Impairment loss (reversal) on equity instruments at FVOCI is not recognized separately.

iii) Debt instruments

Subsequent measurement of debt instruments depends on the Group's business model in which the asset is managed and the contractual cash flow characteristics of the asset. Debt instruments are classified as financial assets at amortized cost, at FVOCI, or at FVTPL. Debt instruments are reclassified only when the Group's business model changes.

ⓐ Financial assets at amortized cost

Assets that are held within a business model whose objective is to hold assets to collect contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. Impairment losses, and gains or losses on derecognition of the financial assets at amortized cost are recognized in profit or loss. Interest income on the effective interest method is included in the 'Interest income' in the consolidated statement of comprehensive income.

ⓑ Financial assets at FVOCI

Assets that are held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Other than impairment losses, interest income amortized using effective interest method and foreign exchange differences, gains or losses of the financial assets at FVOCI are recognized as other comprehensive income in equity. On derecognition, gains or losses accumulated in other comprehensive income are reclassified to profit or loss. The interest income on the effective interest method is included in the 'Interest income' in the consolidated statement of comprehensive income. Foreign exchange differences and impairment losses are included in the 'Net foreign currency transaction gain' and 'Impairment loss on financial assets' in the consolidated statement of comprehensive income, respectively.

ⓒ Financial assets at FVTPL

Debt securities other than financial assets at amortized costs or FVOCI are classified at FVTPL. Unless hedge accounting is applied, gains or losses from financial assets at FVTPL are recognized as profit or loss and are included in 'Net gain on financial assets at fair value through profit or loss' in the consolidated statement of comprehensive income.

2. Significant accounting policies (continued)

(m) Non-derivative financial assets (continued)

iv) Embedded derivatives

Financial assets with embedded derivatives are classified regarding the entire hybrid contract, and the embedded derivatives are not separately recognized. The entire hybrid contract is considered when it is determined whether the contractual cash flows represent solely payments of principal and interest.

v) Derecognition of financial assets

The Group derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in transferred financial assets that is created or retained by the Group is recognized as a separate asset or liability.

If the Group retains substantially all the risks and rewards of ownership of the transferred financial assets, the Group continues to recognize the transferred financial assets and recognizes financial liabilities for the consideration received.

vi) Offsetting

Financial assets and financial liabilities are offset and the net amount is presented in the consolidated statement of financial position only when the Group currently has a legally enforceable right to set off the recognized amounts, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

2. Significant accounting policies (continued)

(n) Expected credit loss on financial assets

As for financial assets at amortized cost and financial assets at FVOCI, the expected credit loss is evaluated at the end of each period and recognized as loss allowances.

Since initial recognition, a loss allowance shall be measured by the three stages in the table below depending on the extent of significant increase in credit risk.

Stage	Category	Description
Stage 1	Credit risk has not increased significantly since initial recognition	12 month expected credit losses: Expected credit loss resulting from potential default of financial instruments occurring over 12 months from the end of reporting period
Stage 2	Credit risk has increased significantly since initial recognition	Lifetime expected credit losses: Expected credit loss resulting from all potential default of financial instruments occurring over the expected life
Stage 3	Credit-impaired financial assets	

However, as for the financial assets whose credit is impaired at the initial recognition, only the cumulative change in the lifetime expected credit loss is recognized as the loss allowance.

The 'lifetime' refers to the expected life to the contractual maturity of the financial asset.

i) Forward looking information

The Group determines a material increase on credit risk and estimates the expected credit loss on a forward looking basis.

The measuring factors of the expected credit loss are assumed to have certain relationship with the economic cycle. Through relationship analysis between the macroeconomic variables and the credit risk measuring factors, the forward looking information is reflected in the expected credit loss estimation.

ii) Financial assets at amortized cost

The expected credit loss on the financial assets at amortized cost is recognized as the difference between the present value of the contractual cash flow and the present value of the expected cash flow. The expected cash flow is estimated separately for the individually material financial assets.

For the financial assets which are not individually material, they are included in a group of assets with a similar credit risk and expected credit loss is estimated collectively.

The expected credit losses of financial assets measured as amortized cost are presented net of loss allowance, and the allowance is derecognized together with the asset when it is determined to be unrecoverable. When the loan previously written-off is subsequently collected, it is recognized as an increase in loss allowance. At each reporting date, the Group recognizes in profit or loss the amount of the change in lifetime expected credit losses.

iii) Financial assets at FVOCI

The expected credit loss on the financial assets at FVOCI is calculated using the same method as that on the financial assets at amortized cost, however the changes in loss allowance are recognized as other comprehensive income. As for disposal and repayment, the loss allowance is reclassified from other comprehensive income to profit or loss.

2. Significant accounting policies (continued)

(o) Derivative financial instruments

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are accounted for as described below.

i) Hedge accounting

The Group holds forward exchange contracts, interest rate swaps, currency swaps and other derivative contracts to manage interest rate risk and foreign exchange risk. The Group designated derivatives as hedging instruments to hedge the risk of changes in the fair value of assets, liabilities or firm commitments (a fair value hedge) and foreign currency risk of highly probable forecasted transactions or firm commitments (a cash flow hedge), and foreign currency risk of net investment in foreign operation (net investment hedges).

On initial designation of the hedge, the Group formally documents the relationship between the hedging instrument(s) and hedged item(s), including the risk management objectives and strategy in undertaking the hedge transaction, together with the methods that will be used to assess the effectiveness of the hedging relationship.

ii) Fair value hedges

Changes in the fair value of a derivative hedging instrument designated as a fair value hedge are recognized in profit or loss. The gain or loss from remeasuring the hedging instrument at fair value and the gain or loss on the hedged item attributable to the hedged risk are recognized in profit or loss in the same line item of the consolidated statement of comprehensive income.

The Group discontinues fair value hedge accounting if the hedging instrument expires or is sold, terminated or exercised, or if the hedge no longer meets the criteria for hedge accounting. Any adjustment arising from gain or loss on the hedged item attributable to the hedged risk is amortized to profit or loss from the date the hedge accounting is discontinued.

2. Significant accounting policies (continued)

(o) Derivative financial instruments (continued)

iii) Cash flow hedges

When a derivative is designated as the hedging instrument in a hedge of the variability in cash flows attributable to a particular risk associated with a recognized asset or liability or a highly probable forecasted transaction that could affect profit or loss, the effective portion of changes in the fair value of the derivative is recognized in other comprehensive income and presented in the hedging reserve in equity. The amount recognized in other comprehensive income is removed and included in profit or loss in the same period as the hedged cash flows affect profit or loss under the same line item in the consolidated statements of comprehensive income as the hedged item. Any ineffective portion of changes in the fair value of the derivative is recognized immediately in profit or loss.

Once hedge accounting is discontinued, any cumulative gain or loss existing in equity at that time and is recognized over the period the forecast transaction occurs as profit or loss. However, when a forecast transaction is no longer expected to occur, the cumulative gain or loss recognized in equity is immediately recognized in the profit or loss.

If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated, exercised, or the designation is revoked, then hedge accounting is discontinued prospectively. The cumulative gain or loss previously recognized in other comprehensive income and presented in the hedging reserve in equity remains there until the forecasted transaction affects profit or loss. When the hedged item is a non-financial asset, the amount recognized in other comprehensive income is transferred to the carrying amount of the asset when the asset is recognized. If the forecasted transaction is no longer expected to occur, then the balance in other comprehensive income is recognized immediately in profit or loss. In other cases the amount recognized in other comprehensive income is transferred to profit or loss in the same period that the hedged item affects profit or loss.

iv) Hedge of net investment

Foreign currency differences arising on the retranslation of a financial liability designated as a hedge of a net investment in a foreign operation are recognized in other comprehensive income to the extent that the hedge is effective. To the extent that the hedge is ineffective, such differences are recognized in profit or loss. When the hedged part of a net investment is disposed of, the relevant amount in the accumulated other comprehensive income is transferred to profit or loss as part of the profit or loss on disposal in accordance with K-IFRS No.1021, *'The Effects of Changes in Foreign Exchange Rates'*.

v) Embedded derivatives

If a hybrid contract contains a host that is not a financial asset, embedded derivatives are separated from the host contract and accounted for separately only if the economic characteristics and risks of the host contract and the embedded derivative are not closely related; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the combined instrument is not designated at FVTPL. Changes in the fair value of separable embedded derivatives are recognized immediately in profit or loss.

vi) Derivative financial instruments held for trading

Changes in the fair value of derivative financial instruments not designated as a hedging instrument are recognized immediately in profit or loss.

2. Significant accounting policies (continued)

(o) Derivative financial instruments (continued)

vii) Day one profit or loss

If the Group uses a valuation technique that incorporates data not obtained from observable markets for the fair value at initial recognition of financial instruments, there may be a difference between the transaction price and the amount determined using that valuation technique. As for these circumstances, the difference between the fair value at the initial recognition and the transaction price is not recognized as profit or loss but deferred. The deferred difference is amortized by using straight line method over the life of the financial instruments.

(p) Property and equipment

Property and equipment are initially measured at cost and after initial recognition. The cost of property and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Property and equipment are carried at cost less accumulated depreciation and accumulated impairment losses. Certain land and buildings are measured at fair value at the date of transition to K-IFRS, which is deemed cost, in accordance with K-IFRS No.1101, *'First-time Adoption of K-IFRS'*. Dividend from relevant revaluation surplus is prohibited in accordance with the resolution of the board of directors.

The Group recognizes in the carrying amount of an item of property and equipment the cost of replacing part of property and equipment when that cost is incurred if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of those parts that are replaced is derecognized. The costs of the day-to-day servicing of property and equipment are recognized in profit or loss as incurred.

Land is not depreciated. Other property and equipment are depreciated on a straight-line basis over the estimated useful lives, which most closely reflect the expected pattern of consumption of the future economic benefits embodied in the asset. Leased assets under finance leases are depreciated over the shorter of the lease term and their useful lives. The estimated useful lives for the current and comparative periods are as follows:

Descriptions	Useful lives
Buildings	40 years
Other properties	4~5 years

The gain or loss arising from the derecognition of an item of property and equipment, which is included in profit or loss, is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item.

Depreciation methods, useful lives and residual values are reassessed at each fiscal year-end and any adjustment is accounted for as a change in accounting estimate.

2. Significant accounting policies (continued)

(q) Intangible assets

Intangible assets are measured initially at cost and, subsequently, are carried at cost less accumulated amortization and accumulated impairment losses.

Amortization of intangible assets except for goodwill is calculated on a straight-line basis over the estimated useful lives of intangible assets as below from the date that they are available for use. The residual value of intangible assets is zero. However, as there are no foreseeable limits to the periods over which club memberships are expected to be available for use, this intangible asset is determined as having indefinite useful lives and not amortized.

Descriptions	Useful lives
Software and capitalized development cost	5 years
Other intangible assets	5 years or contract periods, whichever the shorter

Amortization periods and the amortization methods for intangible assets with finite useful lives are reviewed at the end of each reporting period. The useful lives of intangible assets that are not being amortized are reviewed at the end of each reporting period to determine whether events and circumstances continue to support indefinite useful life assessments for those assets. Changes are accounted for as changes in accounting estimates.

Expenditures on research activities, undertaken with the prospect of gaining new technical knowledge and understanding, are recognized in profit or loss as incurred. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

(r) Investment properties

Investment property is property held either to earn rental income or for capital appreciation or both. An investment property is initially recognized at cost including any directly attributable expenditure. Subsequent to initial recognition, the asset is measured at cost less accumulated depreciation and accumulated impairment losses, if any.

The depreciation method and the estimated useful lives for the current and comparative periods were as follows:

Descriptions	Depreciation method	Useful lives
Buildings	Straight-line	40 years

Subsequent costs are recognized in the carrying amount of investment property at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing are recognized in profit or loss as incurred.

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting date and adjusted, if appropriate. The change is accounted for as changes in accounting estimates.

2. Significant accounting policies (continued)

(s) Leases - policies applicable from January 1, 2019

The Group leases various tangible assets, such as real estate and vehicles, and the terms of the lease are negotiated individually and include a variety of terms and conditions. There are no other restrictions imposed by the lease contracts, except that the lease assets cannot be provided as collaterals for borrowings.

At the commencement date of the lease, the Group recognizes a right-of-use asset and a lease liability. The payment of each lease is allocated to the repayment of the liability and finance cost. The Group recognizes in profit or loss the amount calculated to produce a constant periodic rate of interest on the lease liability balance for each period as finance costs.

Right-of-use assets are depreciated using a straight-line method from the inception of the lease over the lease term of the right-of-use assets.

Lease liabilities are measured at present value of the lease payments that are not paid at the commencement date of the lease agreement, and included in other liabilities. Lease payments included in the measurement of the lease liabilities consist of the following:

- Fixed lease payments (including in-substance fixed payments, less any lease incentives receivable)
- Variable lease payments depending on an index or a rate
- Amounts expected to be paid by the lessee under a residual value guarantee
- The exercise price under a purchase option that the lessee is reasonably certain to exercise
- Extended lease payments in an optional renewal period if the lessee is reasonably certain to that they will exercise the extension option
- Payments of penalties for early terminating a lease unless the lessee is reasonably certain not to terminate early

If the implicit interest rate in the lease can be readily determined, the lease payments shall be discounted using that rate, and if that rate cannot be readily determined, the lessee shall use the lessee's incremental borrowing rate.

The right-of-use asset is initially at cost, which comprises:

- The amount of the initial measurement of the lease liability
- Any lease payments made at or before the commencement date, less any lease incentives received
- Any initial direct costs incurred by the lessee
- An estimate of costs to be incurred by the lessee in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease

The Group includes right-of-use assets within the same line item as that within which the corresponding underlying assets would be presented if they were owned.

Any right-of-use asset that meets the definition of investment property is presented as investment property.

Lease payments associated with short-term leases or leases of low-value assets are recognized as an expense on a straight line basis over the lease term.

Additional considerations for the Group's accounting as a lessee include:

- Extension options and termination options are generally included in multiple real estate lease contracts.
- When estimating the lease term, the Group considers all relevant facts and circumstances that create an economic incentive to exercise the option to extend the lease, or not to exercise the option to terminate the lease.
- Period covered by an extension option (or period covered by termination option) is included in lease term only if the lessee is reasonably certain to exercise (or not to exercise) the option.

2. Significant accounting policies (continued)

(s) Leases - policies applicable from January 1, 2019 (continued)

- The Group reassesses whether it is reasonably certain to exercise (or not to exercise) an extension option (or a termination option), upon the occurrence of either a significant event or a significant change in circumstances that:

ⓐ is within the control of the lessee
ⓑ affects whether the lessee is reasonably certain to exercise an option not previously included in its determination of the lease term, or not to exercise an option previously included in its determination of the lease term.

On December 16, 2019, the IFRS Interpretations Committee published the agenda decision on 'Lease term and useful life of leasehold improvements' that the entity should consider all economic penalties for the termination of the lease in the determination of the enforceable period. The Group is analyzing the impact of changes in accounting policies on the consolidated financial statements over the period of time available for its decision and plans to reflect the effects on the consolidated financial statements after the analysis is completed.

(t) Leases – policies applicable before January 1, 2019

The Group classifies and accounts for leases as either a finance or operating lease, depending on the terms. Leases where the Group assumes substantially all of the risks and rewards of ownership are classified as finance leases. All other leases are classified as operating leases.

i) Finance leases
At the commencement of the lease term, the Group recognizes as finance assets and finance liabilities in its consolidated statements of financial position, the lower amount of the fair value of the leased property and the present value of the minimum lease payments, each determined at the inception of the lease. Any initial direct costs are added to the amount recognized as an asset.

Minimum lease payments are apportioned between the finance charge and the reduction of the outstanding liability. The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability. Contingent rents are charged as expenses in the periods in which they are incurred.

The depreciable amount of a leased asset is allocated to each accounting period during the period of expected use on a systematic basis consistent with the depreciation policy the lessee adopts for depreciable assets that are owned. If there is no reasonable certainty that the lessee will obtain ownership by the end of the lease term, the asset is fully depreciated over the shorter of the lease term and its useful life. The Group reviews to determine whether the leased asset may be impaired.

ii) Operating leases
Payments made under operating leases are recognized in profit or loss on a straight-line basis over the period of the lease.

2. Significant accounting policies (continued)

(u) Non-current assets held for sale

Assets, or disposal groups comprising assets and liabilities, that are expected to be recovered primarily through sale rather than through continuing use, are classified as held for sale. In order to be classified as held for sale, the asset (or disposal group) must be available for immediate sale in its present condition and its sale must be highly probable. The assets or disposal group that are classified as assets held for sale are measured at the lower of their carrying amount and fair value less cost to sell.

The Group recognizes an impairment loss for any initial or subsequent write-down of an asset (or disposal group) to fair value less costs to sell, and a gain for any subsequent increase in fair value less costs to sell, up to the cumulative impairment loss previously recognized.

An asset that is classified as held for sale or part of a disposal group classified as held for sale is not depreciated (or amortized).

(v) Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets, other than assets arising from employee benefits, deferred tax assets and non-current assets held for sale, are reviewed at the end of the reporting period to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, are tested for impairment annually by comparing their recoverable amount to their carrying amount.

The Group estimates the recoverable amount of an individual asset, if it is impossible to measure the individual recoverable amount of an asset, then the Group estimates the recoverable amount of cash-generating unit ("CGU"). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or group of assets. The recoverable amount of an asset or a CGU is the greater of its value in use and its fair value less costs to sell. The value in use is estimated by applying a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or the CGU for which estimated future cash flows have not been adjusted, to the estimated future cash flows expected to be generated by the asset or the CGU.

An impairment loss is recognized if the carrying amount of an asset or a CGU exceeds its recoverable amount. Impairment losses are recognized in profit or loss.

Goodwill acquired in a business combination is allocated to each CGU that is expected to benefit from the synergies arising from the goodwill acquired. Any impairment identified at the CGU level will first reduce the carrying value of goodwill and then be used to reduce the carrying amount of the other assets in the CGU on a pro rata basis. Except for impairment losses in respect of goodwill which are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

2. Significant accounting policies (continued)

(w) Non-derivative financial liabilities

The Group recognizes financial liabilities in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the financial liability in accordance with the substance of the contractual arrangement and the definitions of financial liabilities.

Transaction costs on the financial liabilities at FVTPL are recognized in profit or loss as incurred.

i) Financial liabilities designated at FVTPL

Financial liabilities can be irrevocably designated as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases, or a group of financial instruments is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy. The amount of change in the fair value of the financial liabilities designated at FVTPL that is attributable to changes in the credit risk of that liabilities shall be presented in other comprehensive income.

ii) Financial liabilities at FVTPL

Since initial recognition, financial liabilities at FVTPL is measured at fair value, and changes in the fair value are recognized as profit or loss.

iii) Other financial liabilities

Non-derivative financial liabilities other than financial liabilities at fair value through profit or loss are classified as other financial liabilities. At the date of initial recognition, other financial liabilities are measured at fair value minus transaction costs that are directly attributable to the acquisition. Subsequent to initial recognition, other financial liabilities are measured at amortized cost using the effective interest method.

The Group derecognizes a financial liability from the consolidated statement of financial position when it is extinguished (i.e. when the obligation specified in the contract is discharged, cancelled or expires).

(x) Equity capital

i) Capital stock

Capital stock is classified as equity. Incremental costs directly attributable to the transaction of stock are deducted from equity, net of any tax effects.

ii) Hybrid bonds

The Group classifies an issued financial instrument, or its component parts, as a financial liability or an equity instrument depending on the substance of the contractual arrangement of such financial instrument. Hybrid bonds where the Group has an unconditional right to avoid delivering cash or another financial asset to settle a contractual obligation are classified as an equity instrument and presented in equity.

iii) Non-controlling interests

Non-controlling interests, which represent the equity in a subsidiary not attributable, directly or indirectly, to a parent's ownership interests, consist of the amount of those non-controlling interests at the date of the original combination calculated in accordance with K-IFRS No.1103, '*Business Combinations*' and the non-controlling interests share of changes in equity since the date of the combination.

2. Significant accounting policies (continued)

(y) Employee benefits

i) Short-term employee benefits

Short-term employee benefits are employee benefits that are due to be settled within 12 months after the end of the period in which the employees render the related service. When an employee has rendered service to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

ii) Other long-term employee benefits

The Group's net obligation in respect of other long-term employee benefits that are not expected to be settled wholly before 12 months after the end of the annual reporting period in which the employees render the related service, is the amount of future benefit that employees have earned in return for their service in the current and prior periods. That benefit is discounted to determine its present value. Remeasurements are recognized in profit or loss in the period in which they arise.

iii) Retirement benefits: defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Group's net obligation in respect of defined benefit plans is calculated by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of plan assets is deducted. The calculation is performed annually by an independent actuary using the projected unit credit method.

The discount rate is the yield at the reporting date on high-quality corporate bonds that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid. The Group recognizes service cost and net interest on the net defined benefit liability (asset) in profit or loss and remeasurements of the net defined benefit liability (asset) in other comprehensive income.

iv) Retirement benefits: defined contribution plans

The Group recognizes the contribution expense as an account of severance payments in profit or loss in the period according to the defined contribution plans.

v) Termination benefits

Termination benefits are expensed at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognizes costs for a restructuring. If benefits are not expected to be wholly settled within 12 months of the reporting date, then they are discounted.

2. Significant accounting policies (continued)

(z) Share-based payment transactions

The grant date fair value of share-based payment awards granted to employees is recognized as an employee expense, with a corresponding increase in equity, over the period that the employees unconditionally become entitled to the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and non-market vesting conditions are expected to be met, such that the amount ultimately recognized as an expense is based on the number of awards that do meet the related service and non-market performance conditions at the vesting date. For share-based payment awards with non-vesting conditions, the grant date fair value of the share-based payment is measured to reflect such conditions and there is no true-up for differences between expected and actual outcomes.

The fair value of the amount payable to employees in respect of share appreciation rights, which are settled in cash, is recognized as an expense with a corresponding increase in liabilities, over the period that the employees unconditionally become entitled to payment. The liability is remeasured at each reporting date and at settlement date. Any changes in the fair value of the liability are recognized as personnel expense in profit or loss.

The Group has granted share-based payment based on Shinhan Financial Group's share to the employees. In accordance with a repayment arrangement with Shinhan Financial Group, the Group is required to pay Shinhan Financial Group for the provision of the share-based payments. The Group recognizes the costs as expenses and accrued expenses in liabilities for the service period. When vesting conditions are not satisfied because of death, retirement or dismissal of employees during the specified service period, no amount is recognized for goods or services received on a cumulative basis. Share-based payment arrangements in which the Group has no obligation to settle the share-based payment transaction are accounted for as equity-settled share-based payment transactions, regardless of the repayment arrangement with Shinhan Financial Group.

(aa) Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The risks and uncertainties that inevitably surround many events and circumstances are taken into account in reaching the best estimate of a provision. Where the effect of the time value of money is material, provisions are determined at the present value of the expected future cash flows.

Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimate. If it is no longer probable that an outflow of resources embodying economic benefits will be required to settle the obligation, the provision is reversed.

Provisions shall be used only for expenditures for which the provisions are originally recognized.

2. Significant accounting policies (continued)

(ab) Financial guarantee contract

A financial guarantee contract is a contract that requires the Group to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument. Financial guarantee contracts are recognized initially at their fair value, and the initial fair value is amortized over the life of the financial guarantee contract. The financial guarantee liability is subsequently measured at the higher of the amount of the best estimate of the expenditure required to settle the present obligation at the end of reporting period; and the amount initially recognized less, cumulative amortization recognized on a straight-line basis over the guarantee period. Financial guarantee liabilities are included within other liabilities.

From January 1, 2018, after initial recognition, financial guarantee contracts are measured at the higher of:
- Loss allowance in accordance with K-IFRS No.1109, '*Financial Instruments*'
- The amount initially recognized less, when appropriate, the cumulative amount of income recognized in accordance with the principles of K-IFRS No.1115, '*Revenue from Contracts with Customers*'

(ac) Recognition of revenues and expenses

The Group's revenues are recognized using five-step revenue recognition model as follows: ① 'Identifying the contract' → ② 'Identifying performance obligations' → ③ 'Determining the transaction price' → ④ 'Allocating the transaction price to performance obligations' → ⑤ 'Recognizing the revenue by satisfying performance obligations'.

i) Interest income and expense

Interest income and expense are in the scope of K-IFRS No.1109 and recognized in profit or loss using the effective interest method. The effective interest rate is the rate that exactly discounts the estimated future cash payments and receipts through the expected life of the financial asset or liability or, where appropriate, a shorter period to the net carrying amount of the financial asset or liability. When calculating the effective interest rate, the Group estimates cash flows considering all contractual terms of the financial instrument, but does not consider future credit losses. The calculation includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate, and all other premiums or discounts. When it is not possible to estimate reliably the cash flows or the expected life of a financial instrument, the Group uses the contractual cash flows over the full contractual term of the financial instrument.

Once a financial asset or a group of similar financial assets has been written down as a result of an impairment loss, interest income is thereafter recognized using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

ii) Fees and commission

The recognition of revenue for financial service fees depends on the purposes for which the fees are assessed and the basis of accounting for any associated financial instrument.

2. Significant accounting policies (continued)

(ac) Recognition of revenues and expenses (continued)

ⓐ Fees that are an integral part of the effective interest rate of a financial instrument

Such fees are generally treated as an adjustment to the effective interest rate. Such fees may include compensation for activities such as evaluating the borrower's financial condition, evaluating and recording guarantees, collateral and other security arrangements, preparing and processing documents, closing the transaction and the origination fees received on issuing financial liabilities. However, when the financial instrument is measured at fair value with the change in fair value recognized in profit or loss, the fees are recognized as revenue when the instrument is initially recognized.

ⓑ Fees earned as services are provided

Fees and commission income, including investment management fees, sales commission, and account servicing fees, are recognized as revenue when the related service as a performance obligation is provided.

ⓒ Fees that are earned on the execution of a significant act

The fees that are earned on the execution of a significant act including commission on the allotment of shares or other securities to a client, placement fee for arranging a loan between a borrower and an investor and sales commission, are recognized as revenue when the significant act as a performance obligation has been completed.

iii) Dividends

Dividends income is recognized when the shareholder's right to receive payment is established. Usually this is the ex-dividend date for equity securities.

(ad) Income tax

Income tax expense comprises current and deferred tax. Current tax and deferred tax are recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

Shinhan Financial Group, the parent company, files its national income tax return with the Korean tax authorities under the consolidated corporate tax system, which allows it to make national income tax payments based on the consolidated profits or losses of the Shinhan Financial Group and its wholly owned domestic subsidiaries including the Bank. Deferred taxes are measured based on the future tax benefits expected to be realized in consideration of the expected profits or losses of eligible companies in accordance with the consolidated corporate tax system. Consolidated corporate tax amounts, once determined, are allocated to each of the subsidiaries and are used as a basis for the income taxes to be recorded in their stand-alone financial statements.

The Group recognizes deferred tax liabilities for all taxable temporary differences associated with investments in subsidiaries, associates, and interests in joint ventures, except to the extent that the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The Group recognizes deferred tax assets for all deductible temporary differences arising from investments in subsidiaries and associates, to the extent that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

2. Significant accounting policies (continued)

(ad) Income tax (continued)

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and deferred tax assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period to recover or settle the carrying amount of its assets and liabilities.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and reduced the carrying amount to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized.

Deferred tax assets and liabilities are offset only if there is a legally enforceable right to offset the related current tax liabilities and assets, and they relate to income taxes levied by the same tax authority and they intend to settle current tax liabilities and assets on a net basis.

If any additional income tax expense exists by payment of dividends, the Group recognizes it when the liability relating to the payment is recognized.

Because of the tax positions taken by the Group, tax uncertainties arise from the complexity of transactions and differences in tax law interpretation. Also, uncertainty arises from a tax refund suit, tax investigation, or a refund suit against the tax authorities' assessed tax amount. For the tax amount paid to the tax authorities, in accordance with K-IFRS No.2123, it will be recognized as the corporate tax assets if a refund in the future is probable. In addition, the amount expected to be paid as a result of the tax investigation is recognized as the tax liability.

(ae) Accounting for trust accounts

The Group accounts for trust accounts separately from its bank accounts under *the Financial Investment Services and Capital Markets Act* and thus the trust accounts are not included in the accompanying consolidated financial statements. Borrowings from trust accounts are included in other liabilities. Trust fees and commissions in relation to the service provided to trust accounts by the Group are recognized as fees and commission income.

(af) Earnings per share

The Group presents basic and diluted earnings per share (EPS) data for its ordinary shares. Basic EPS is calculated by dividing the profit or loss attributable to the ordinary shareholder of the Bank by the weighted average number of common shares outstanding during the period, adjusted for own shares held. Diluted EPS is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of ordinary shares outstanding, adjusted for own shares held, for the effects of all dilutive potential ordinary shares, which comprise share options granted to employees.

3. Financial risk management

3-1. Credit risk

Credit risk is the risk of financial loss of the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligation, and arises principally from due from banks, the lending process related to loans, investment activities in debt securities and off balance sheet items including loan commitments, etc. Credit risk management is critical to the Group's business activities; thus, the Group carefully manages its credit risk exposure.

(a) Credit risk management

Major policies of the credit risk management are determined by the Risk Policy Committee, which is the Group's executive decision-making body for credit risk management. The Risk Policy Committee is led by the Group's Deputy President and Head of Risk Management Group. The Risk Policy Committee also consists of chief officers from eight different business units. The Credit Review Committee performs credit review evaluations and operates separately from the Risk Policy Committee.

Each business unit is required to implement the Group's risk management policies and procedures. Risk Management Department reviews compliance of business units with agreed exposure limits established by the Risk Policy Committee, including those for selected industries, country risk and product types.

The Group established the authorization structure for the approval and renewal of credit facilities. Authorization limits are allocated to the business unit credit officer. Larger facilities require approval by the Credit Committee. The Group assesses all credit exposures in excess of designated limits, prior to facilities being committed to customers by the business unit concerned. Renewals and review of facilities are subject to the same review process.

The Group is responsible for limiting concentrations of exposures to counterparties, geographies and industries, and by issuers, credit rating band, market liquidity and country.

The Group develops and maintains the risk grading system in order to categorize exposures according to the degree of risk of financial loss faced and to focus management on the attendant risks. The risk grading system is used in determining credit approvals, credit renewals, credit pricing, credit limits, or where impairment provisions may be required against specific credit exposures for existing loans.

Each business unit is responsible for the quality and performance of its credit portfolio and for monitoring and controlling all credit risks in its portfolio, including those subject to central approval. In addition to periodic loan reviews by credit officers, the Group also utilizes an automated monitoring tool which conducts identifications for companies with high probability of default. Regular reports on the credit quality of portfolios of each business unit are provided to the Credit Administration Department who may require appropriate corrective action to be taken.

3. Financial risk management (continued)

3-1. Credit risk (continued)

(b) Risk management and risk mitigation policy

In order to control the credit risk of the Group at an appropriate level, the following risk management system is established and operated.

- Credit risk limits are set and managed by business segments, customer, product, industry, etc. based on credit VaR (Value at Risk) and maximum exposure amount.
- The Risk Management Department establishes and manages limits for credit VaR, and maximum exposure limits. The Credit Planning Department and the Credit Assessment Department conduct maximum exposure limits.
- The Risk Management Department and Risk Engineering Department establishes a credit risk limit operation plan for the entire bank at least once a year, and commits it to the risk policy committee.
- Each business unit monitors and adheres to credit risk limits assigned.
- Identify and manage by individual and corporate customers, industry and nationality for identified credit risk.
- Set limits on acceptable risks for individual borrowers or borrowers, and by geographical sectors.
- The risk is reviewed on an annual basis or within a period when it is deemed necessary, and the limits of risks by product, industry and country are approved by the Board on a quarterly basis.
- The maximum amount of exposure by the borrower, including the public institution, is managed separately by the lower level limit for the accounts in the consolidated financial statements and the other accounts, and the limit of the risk is also determined for daily transactions related to commodity transactions such as foreign currency forward transactions.
- Actual maximum exposure limit is managed on a daily basis.
- Maximum credit risk exposure is managed in the process of analyzing the interest and principal repayment ability of the borrower, and if necessary, changes the credit limit in the process.

Other risk management measures are as follows.

i) Collateral

The Group has adopted policies and procedures to mitigate credit risk. In connection with credit risk, collateral is generally required, and the Group has adopted a policy for pledging certain types of assets. The main types of collateral are as follows:
- Mortgage
- Real estate, inventories, accounts receivable, etc.
- Financial instruments such as debt securities and equity securities

Long-term loans are generally collateralized. On the other hand, revolving personal loans are generally unsecured. In addition, in order to minimize losses due to credit risk, the Group establishes additional collateral for the counterparty in the event of an indication of impairment of the asset.

Collateral for financial assets other than loans is subject to the nature of the products. Except for special cases such as Asset Backed Securities (ABS), unsecured securities are common in the case of debt securities.

ii) Derivative financial instruments

The Group maintains a credit limit on the amount and duration of derivative financial instruments that are in between the disposal agreements after purchase.

3. Financial risk management (continued)

3-1. Credit risk (continued)

(b) Risk management and risk mitigation policy (continued)

iii) Collective offsetting contracts

The Group manages its maximum exposure to credit losses by engaging in collective offsetting contracts with counterparties in executing significant number of transactions.

Collective offsetting contracts generally do not result from offsetting assets and liabilities in the consolidated financial statements, as transactions are usually set at a gross amount basis. However, when all amounts to a particular counterparty are set on a net basis, the credit risk associated with a favorable contract is reduced by collective offsetting contracts if losses are incurred.

The Group's overall maximum exposure to credit risk that is part of a collective offsetting contract can vary substantially within a short period of time because it is affected by each transaction.

iv) Credit related contracts

Guarantees and credit enhancements have credit risks similar to credit. Credit (which guarantees credit on behalf of the customer by issuing a note to a third party for the amount requested under specific terms and conditions) is secured by the underlying commodities associated with them, it involves less risk. The credit enhancement arrangements represent the unused portion of the credit limit in the form of a credit, guarantee or letter of credit. In relation to the credit risk of a credit enhancement arrangement, the Group is potentially exposed to the same amount as the total unused arrangements. Long-term contracts generally have a greater degree of credit risk than short-term, and the Group monitors the maturity of credit arrangements.

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model)

i) Determining significant increases in credit risk since initial recognition

At each reporting date, the Group assesses whether the credit risk on a financial instrument has increased significantly since initial recognition. When making the assessment, the Group uses the change in the risk of default occurring over the expected life of the financial instrument instead of the change in the amount of expected credit losses. To make that assessment, the Group compares the risk of default occurring on the financial instrument as at the reporting date with the risk of default occurring on the financial instrument as at the date of initial recognition and consider reasonable and supportable information, that is available without undue cost or effort, that is indicative of significant increases in credit risk since initial recognition. The supporting information also includes historical default data held by the Group and the analysis by internal credit risk rating specialists.

ⓐ Measuring the risk of default

The Group assigns an internal credit risk rating to each individual exposure based on observable data and historical experiences that have been found to have a reasonable correlation with the risk of default. The internal credit risk rating is determined by considering both qualitative and quantitative factors that indicate the risk of default, which may vary depending on the nature of the exposure and the type of borrower.

The internal credit risk rating based on the borrower’s information related to each individual exposures on initial recognition, may change depending on the results of continuing monitoring and reviews.

3. Financial risk management (continued)

3-1. Credit risk (continued)

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model) (continued)

i) Determining significant increases in credit risk since initial recognition (continued)

ⓑ Measuring term structure of probability of default

The Group accumulates information after analyzing the information regarding exposure to credit risk and default information by the type of product and borrower and results of internal credit risk assessment. For some portfolios, the Group uses information obtained from external credit rating agencies when performing these analyses.

The Group applies statistical techniques to estimate the probability of default for the remaining life of the exposure from the accumulated data and to estimate changes in the estimated probability of default over time.

ⓒ Significant increases in credit risk

The Group uses the indicators defined as per portfolio to determine the significant increase in credit risk and such indicators generally consist of changes in the risk of default estimated from changes in the internal credit risk rating, qualitative factors, days of delinquency, and others. The factors evaluated to determine whether credit risk of financial instruments has significantly increased after the initial recognitions is summarized as follows:

Corporate exposures	Retail exposures
Significant change in credit ratings	Significant change in credit ratings
Continued past due for more than 30 days	Continued past due for more than 30 days
Loan classification of precautionary and below	Loan classification of precautionary and below
Borrower with early warning signals	Borrower with early warning signals
Negative net assets	Specific pool segment
Adverse audit opinion or disclaimer of opinion	Collective loans for housing for which the constructors are insolvent
Interest coverage ratios of below 1 for consecutive three years	
Negative cash flows from operating activities for consecutive two years	

The Group considers the credit risk of financial instrument has been significantly increased since initial recognition if a specific exposure is past due for more than 30 days. The Group counts the number of days past due from the earliest date on which the Group has not received the contractual payments in full from the borrower and does not consider the grace period granted to the borrower.

The Group regularly reviews the criteria for determining if there have been significant increases in credit risk from the following perspective.

- A significant increase in credit risk shall be identified prior to the occurrence of default.
- The criteria established to judge the significant increase in credit risk shall be more predictive than the criteria for days of delinquency.
- As a result of applying the judgment criteria, financial instruments shall not move too frequently between the 12-months expected credit losses measurement and the lifetime expected credit losses measurement.

3. Financial risk management (continued)

3-1. Credit risk (continued)

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model) (continued)

ii) Modified financial assets

If the contractual cash flows on a financial asset have been renegotiated or modified and the financial asset was not derecognized, the Group assesses whether there has been a significant increase in the credit risk of the financial instrument by comparing the risk of default occurring at initial recognition based on the original, unmodified contractual terms and the risk of default occurring at the reporting date based on the modified contractual terms.

The Group may adjust the contractual cash flows of loans to customers who are in financial difficulties in order to manage the risk of default and enhance the collectability (hereinafter referred to as 'debt restructuring'). These adjustments generally involve extension of maturity, changes in interest payment schedule, and changes in other contractual terms.

Debt restructuring is a qualitative indicator of a significant increase in credit risk and the Group recognizes lifetime expected credit losses for the exposure expected to be the subject of such adjustments. If a borrower faithfully makes payments of contractual cash flows that were modified in accordance with the debt restructuring or if the borrower's internal credit rating has recovered to the level prior to the recognition of the lifetime expected credit losses, the Group recognizes the 12-months expected credit losses for that exposure again.

iii) Risk of default

The Group considers a financial asset to be in default if it meets one or more of the following conditions:
- if a borrower is overdue 90 days or more from the contractual payment date,
- if the Group judges that it is not possible to recover principal and interest without enforcing the collateral on a financial asset

The Group uses the following indicators when determining whether a borrower is in default:
- qualitative factors (e.g. breach of contract terms),
- quantitative factors (e.g. if the same borrower does not perform more than one payment obligations to the Group, the number of days past due per payment obligation. However, in the case of a specific portfolio, the Group uses the number of days past due for each financial instrument.)
- internal data and external data

The definition of default applied by the Group generally conforms to the definition of default defined for regulatory capital management purposes; however, depending on the situations, the information used to determine whether a default has incurred and the extent thereof may vary.

iv) Reflection of forward-looking information

The Group reflects forward-looking information presented by internal experts based on a variety of sources when measuring expected credit losses. For the purpose of estimating these forward-looking information, the Group utilizes the economic outlook published by domestic and overseas research institutes or government and public agencies.

3. Financial risk management (continued)

3-1. Credit risk (continued)

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model) (continued)

The Group reflects future macroeconomic conditions anticipated from a neutral standpoint that is free from bias in measuring expected credit losses. Expected credit losses in this respect reflect conditions that are most likely to occur and are based on the same assumptions that the Group used in its business plan and management strategy.

The Group identified the key macroeconomic variables relevant to forecast credit risk and credit losses for each portfolio as follows by analyzing past experience data and drew correlations across credit risk for each variable.

Key macroeconomic variables	Correlation with credit risk
Economic growth	Negative
Consumer price change rates	Positive
Benchmark rate	Positive
3-year interest rate for Korea treasury bond	Positive
3-year interest rate for corporate bond	Positive
KOSPI	Negative

The predicted correlations between the macroeconomic variables and the risk of default, used by the Group, were derived based on data from the past nine years.

v) Measurement of expected credit losses

Key variables used in measuring expected credit losses are as follows:

- Probability of default (PD)
- Loss given default (LGD)
- Exposure at default (EAD)

These variables have been estimated from historical experience data by using the statistical techniques developed internally by the Group and have been adjusted to reflect forward-looking information.

Estimates of PD over a specified period are estimated by reflecting characteristics of counterparties and their exposure, based on a statistical model at a specific point of time. The Group uses its own information to develop a statistical credit assessment model used for the estimation, and additional information observed in the market is considered for some portfolios such as a group of large corporates. When a counterparty or exposure is concentrated in specific grades, the method of measuring PD for that grades would be adjusted, and the PD by grade is estimated by considering contract expiration of the exposure.

LGD refers to the expected loss if a borrower defaults. The Group calculates LGD based on the experience recovery rate measured from past default exposures. The model for measuring LGD is developed to reflect type of collateral, seniority of collateral, type of borrower, and cost of recovery. In particular, LGD for retail loan products uses loan to value (LTV) as a key variable. The recovery rate reflected in the LGD calculation is based on the present value of recovery amount, discounted at the effective interest rate.

EAD refers to the expected exposure at the time of default. The Group derives EAD reflecting a rate at which the current exposure is expected to be used additionally up to the point of default within the contractual limit. EAD of financial assets is equal to the total carrying amount of the asset, and EAD of loan commitments or financial guarantee contracts is calculated as the sum of the amount expected to be used in the future.

3. Financial risk management (continued)

3-1. Credit risk (continued)

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model) (continued)

When measuring expected credit losses on financial assets, the Group reflects a period of expected credit loss measurement based on a contractual maturity. The Group takes into consideration of the extension rights held by a borrower when deciding the contractual maturity.

Risk factors such as PD, LGD and EAD are collectively estimated according to the following criteria:
- Type of products
- Internal credit risk rating
- Type of collateral
- Loan to value (LTV)
- Industry that the borrower belongs to
- Location of the borrower or collateral
- Days of delinquency

The criteria for classification of groups are periodically reviewed to maintain homogeneity of the group and adjusted if necessary. The Group uses external benchmark information to supplement internal information for a particular portfolio that did not have sufficient internal data accumulated from the past experience.

vi) Write-off of financial assets

The Group writes off a portion of or entire loan or debt security for which the Group does not expect to receive principal and interest. In general, the Group conducts write-off when it is deemed that the borrower has no sufficient resources or income to repay the principal and interest. Such determination on write-off is carried out in accordance with the internal rules of the Group and is carried out with the approval of an external institution, if necessary. Apart from write-off, the Group may continue to exercise its right of collection under its own recovery policy even after the write-off of financial assets.

(In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(d) Maximum exposure to credit risk

The Group's maximum exposure to credit risk without taking account of any collateral held or other credit enhancements as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Due from banks (*1)(*2):			
Banks	₩	4,892,412	5,155,564
Governments		16,629,285	5,425,800
		21,521,697	10,581,364
Loans at amortized cost (*1)(*2):			
Banks		4,029,431	8,725,756
Retail:			
Mortgage lending		52,175,895	49,114,592
Others		86,156,152	76,271,127
		138,332,047	125,385,719
Governments		2,425,213	690,658
Corporate			
Large enterprises		32,198,948	32,548,577
Small and medium-sized enterprises		83,960,258	78,817,756
Special finance		7,075,974	4,965,619
Others		473	941
		123,235,653	116,332,893
Credit cards		149,920	98,780
		268,172,264	251,233,806
Loans at FVTPL:			
Banks		-	20,004
Corporate			
Large enterprises		714,946	319,918
Small and medium-sized enterprises		154,045	305,315
		868,991	625,233
		868,991	645,237
Securities at FVTPL:			
Debt securities		18,491,116	15,334,231
Gold/silver deposits		111,715	154,881
		18,602,831	15,489,112
Securities at FVOCI (*1)		40,060,734	31,435,546
Securities at amortized cost (*1)		20,251,888	16,824,400
Derivative assets		2,101,993	1,484,458
Other financial assets (*1)(*3)		13,518,528	14,200,801
Off balance sheet items:			
Financial guarantee contracts		4,676,823	4,391,207
Loan commitments and other liabilities for credit		97,161,128	91,002,891
		101,837,951	95,394,098
	₩	486,936,877	437,288,822

(*1) The maximum exposure amounts for due from banks and loans and other financial assets are measured as the amount net of allowances.

(*2) Due from banks and loans were classified as similar credit risk group to be with consistent calculating capital adequacy ratio under New Basel Capital Accord (Basel III).

(In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(d) Maximum exposure to credit risk (continued)

(*3) Other financial assets comprise accounts receivable, accrued income, guarantee deposits, domestic exchange settlements receivables, suspense receivables, etc.

(e) Credit risk exposure by credit risk grade

i) The maximum exposures of financial instruments to credit risk by credit risk grade as of December 31, 2019 and 2018 were as follows:

	December 31, 2019								
	12-month expected loss		Life time expected loss						
	Grade 1	Grade 2	Grade 1	Grade 2	Impaired	Total	Allowances	Net	Mitigation of credit risk due to collateral
Due from banks:									
Banks	₩ 4,895,933	-	3,905	-	-	4,899,838	(7,426)	4,892,412	6,599
Governments	16,633,139	-	563	-	-	16,633,702	(4,417)	16,629,285	-
	21,529,072	-	4,468	-	-	21,533,540	(11,843)	21,521,697	6,599
Loans at amortized cost:									
Banks	2,778,937	1,179,294	73,770	1,804	-	4,033,805	(4,374)	4,029,431	44,332
Retail	124,571,539	4,882,715	5,519,094	3,335,828	382,889	138,692,065	(360,018)	138,332,047	79,289,750
Governments	2,314,523	111,987	-	-	-	2,426,510	(1,297)	2,425,213	-
Corporate	73,865,617	27,335,455	9,650,012	12,687,832	854,700	124,393,616	(1,157,963)	123,235,653	70,113,899
Credit cards	23	148,484	6	3,418	1,505	153,436	(3,516)	149,920	967
	203,530,639	33,657,935	15,242,882	16,028,882	1,239,094	269,699,432	(1,527,168)	268,172,264	149,448,948
Securities at FVOCI (*1)	31,174,144	8,647,496	-	239,094	-	40,060,734	-	40,060,734	-
Securities at amortized cost	18,962,245	1,271,681	23,273	-	-	20,257,199	(5,311)	20,251,888	-
	₩ 275,196,100	43,577,112	15,270,623	16,267,976	1,239,094	351,550,905	(1,544,322)	350,006,583	149,455,547

(*1) Provision for credit loss allowance recognized in other comprehensive income on securities at FVOCI is ₩21,126 million.

	December 31, 2018								
	12-month expected loss		Life time expected loss						
	Grade 1	Grade 2	Grade 1	Grade 2	Impaired	Total	Allowances	Net	Mitigation of credit risk due to collateral
Due from banks:									
Banks	₩ 5,162,123	-	3,816	-	-	5,165,939	(10,375)	5,155,564	-
Governments	5,430,210	-	-	-	-	5,430,210	(4,410)	5,425,800	-
	10,592,333	-	3,816	-	-	10,596,149	(14,785)	10,581,364	-
Loans at amortized cost:									
Banks	7,715,882	921,256	91,050	11,494	-	8,739,682	(13,926)	8,725,756	54,903
Retail	113,520,487	4,138,405	4,853,910	2,897,946	340,159	125,750,907	(365,188)	125,385,719	75,022,341
Governments	688,758	2,399	-	-	-	691,157	(499)	690,658	-
Corporate	73,508,663	22,812,566	9,529,058	11,000,465	773,440	117,624,192	(1,291,299)	116,332,893	66,769,705
Credit cards	19	100,172	2	2,318	1,069	103,580	(4,800)	98,780	548
	195,433,809	27,974,798	14,474,020	13,912,223	1,114,668	252,909,518	(1,675,712)	251,233,806	141,847,497
Securities at FVOCI (*1)	24,490,856	6,838,860	-	105,830	-	31,435,546	-	31,435,546	-
Securities at amortized cost	16,006,518	800,172	22,474	-	-	16,829,164	(4,764)	16,824,400	-
	₩ 246,523,516	35,613,830	14,500,310	14,018,053	1,114,668	311,770,377	(1,695,261)	310,075,116	141,847,497

(*1) Provision for credit loss allowance recognized in other comprehensive income on securities at FVOCI is ₩20,564 million.

(In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(e) Credit risk exposure by credit risk grade (continued)

ii) Credit risk exposures per credit grade of off balance sheet items as of December 31, 2019 and 2018 were as follows:

		December 31, 2019			
		12-month expected credit loss	Life time expected credit loss	Impaired	Total
Financial guarantee:					
Grade 1	₩	2,789,973	246,814	-	3,036,787
Grade 2		1,494,534	144,691	-	1,639,225
Impaired		-	-	811	811
		4,284,507	391,505	811	4,676,823
Loan commitment and other credit line					
Grade 1		73,264,970	4,463,089	-	77,728,059
Grade 2		17,818,559	1,613,799	-	19,432,358
Impaired		-	-	711	711
		91,083,529	6,076,888	711	97,161,128
	₩	95,368,036	6,468,393	1,522	101,837,951

		December 31, 2018			
		12-month expected credit loss	Life time expected credit loss	Impaired	Total
Financial guarantee:					
Grade 1	₩	2,117,330	144,396	-	2,261,726
Grade 2		1,975,530	152,162	-	2,127,692
Impaired		-	-	1,789	1,789
		4,092,860	296,558	1,789	4,391,207
Loan commitment and other credit line					
Grade 1		69,820,060	2,995,450	-	72,815,510
Grade 2		16,931,240	1,256,141	-	18,187,381
Impaired		-	-	-	-
		86,751,300	4,251,591	-	91,002,891
	₩	90,844,160	4,548,149	1,789	95,394,098

(In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(e) Credit risk exposure by credit risk grade (continued)

iii) Credit risk exposures per collateral of financial instruments as of December 31, 2019 and 2018 were as follows:

		December 31, 2019			
		12-month expected credit loss	Life time expected credit loss	Impaired	Total
Guarantees	₩	11,523,372	3,694,329	52,199	15,269,900
Deposits and savings		729,250	237,633	1,029	967,912
Property and equipment		1,004,903	307,109	12,511	1,324,523
Real estate		122,283,975	14,287,456	336,493	136,907,924
	₩	135,541,500	18,526,527	402,232	154,470,259

		December 31, 2018			
		12-month expected credit loss	Life time expected credit loss	Impaired	Total
Guarantees	₩	12,805,907	3,827,687	50,198	16,683,792
Deposits and savings		761,631	222,692	677	985,000
Property and equipment		1,051,573	244,571	18,766	1,314,910
Real estate		113,055,399	13,530,936	256,917	126,843,252
	₩	127,674,510	17,825,886	326,558	145,826,954

iv) Credit risk exposures per LTV of mortgage loans as of December 31, 2019 and 2018 were as follows:

		December 31, 2019					
		40% or less	Above 40% ~ 60%	Above 60% ~ 80%	Above 80% ~ 100%	Other	Total
Loans at amortized cost	₩	17,977,438	15,304,948	14,449,806	3,370,661	1,093,427	52,196,280
Less: allowance		(1,193)	(2,247)	(6,481)	(6,615)	(3,850)	(20,386)
	₩	17,976,245	15,302,701	14,443,325	3,364,046	1,089,577	52,175,894

		December 31, 2018					
		40% or less	Above 40% ~ 60%	Above 60% ~ 80%	Above 80% ~ 100%	Other	Total
Loans at amortized cost	₩	16,867,813	15,050,255	13,489,872	3,126,966	601,275	49,136,181
Less: allowance		(1,321)	(2,208)	(6,340)	(5,715)	(6,005)	(21,589)
	₩	16,866,492	15,048,047	13,483,532	3,121,251	595,270	49,114,592

(In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(e) Credit risk exposure by credit risk grade (continued)

v) Credit risk exposure per grades of financial instruments as of December 31, 2019 and 2018 were as follow:

Type of borrowers	Grade 1	Grade 2
Banks and Governments	OECD sovereign credit rating of 6 or above (as applied to the nationalities of the banks and governments)	OECD sovereign credit rating of below 6 (as applied to the nationalities of the banks and governments)
Retail	Pool of retail loans with probability of default of less than 2.25%	Pool of retail loans with probability of default of 2.25% or more
Corporate (loans and credit cards)	Internal credit rating of BBB+ or above	Internal credit rating of below BBB+

(f) Nature and effect of modification in contractual cash flows

i) For the financial assets for which the loss allowances have been measured at amounts equal to the lifetime credit losses, and the contractual cash flows were modified during the years ended December 31, 2019 and 2018, the amortized costs before modification amounted to ₩51,227 million and ₩45,178 million, respectively, and the net losses resulting from the modification amounted to ₩8,875 million and ₩14,953 million, respectively.

ii) As of December 31, 2019 and 2018, the book value of financial asset, for which contractual cash flows have been modified while the loss allowance was measured at an amount equal to lifetime expected credit losses at initial recognition, and the loss allowance reverted to being measured at an amount equal to 12-month expected credit losses during the years ended December 31, 2019 and 2018 were ₩3,782 million and ₩1,159 million.

(g) The contractual amounts outstanding on financial assets that were written-off but were still subject to enforcement activity as of December 31, 2019 and 2018 were ₩6,177,901 million and ₩6,043,744 million, respectively.

(h) As of December 31, 2019 and 2018, there were no assets acquired by the execution of collateral.

(In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(i) Concentration by geographic location

An analysis of concentration by geographic location for financial instruments excluding equity securities, net of allowance, as of December 31, 2019 and 2018 were as follows:

		December 31, 2019								
		Korea	U.S.A	U.K	Japan	Germany	Vietnam	China	Other	Total
Due from banks: (*1)										
Banks	₩	207,825	1,188,903	376,785	226,145	151,213	235,046	1,971,924	534,571	4,892,412
Governments		14,084,796	529,096	-	1,080,381	-	140,960	445,526	348,526	16,629,285
		14,292,621	1,717,999	376,785	1,306,526	151,213	376,006	2,417,450	883,097	21,521,697
Loans at amortized cost:										
Banks		1,146,073	-	11,565	63,088	51,953	801,096	844,396	1,111,260	4,029,431
Retail		130,646,542	370,303	5,443	3,888,924	1,531	1,301,979	1,206,531	910,794	138,332,047
Governments		2,313,311	-	-	-	-	-	-	111,902	2,425,213
Corporate		106,038,123	2,892,333	42,803	3,353,511	98,980	2,140,520	2,758,146	5,911,237	123,235,653
Credit cards		6,370	1,415	88	56	30	140,915	40	1,006	149,920
		240,150,419	3,264,051	59,899	7,305,579	152,494	4,384,510	4,809,113	8,046,199	268,172,264
Loans at FVTPL		868,991	-	-	-	-	-	-	-	868,991
Securities at FVTPL		17,874,472	163,598	125,499	18,732	5,064	111	187,773	227,582	18,602,831
Securities at FVOCI		36,297,061	1,520,146	97,710	195,165	93,769	294,095	723,736	839,052	40,060,734
Securities at amortized cost		19,060,306	31,822	-	163,112	-	604,019	40,741	351,888	20,251,888
	₩	328,543,870	6,697,616	659,893	8,989,114	402,540	5,658,741	8,178,813	10,347,818	369,478,405

(*1) Geographical breakdown is the net book value, net of unrecognized balances and allowance for doubtful accounts.

(In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(i) Concentration by geographic location (continued)

An analysis of concentration by geographic location for financial instruments excluding equity securities, net of allowance, as of December 31, 2019 and 2018 were as follows: (continued)

		December 31, 2018								
		Korea	U.S.A	U.K	Japan	Germany	Vietnam	China	Other	Total
Due from banks: (*1)										
Banks	₩	222,634	1,478,810	153,734	454,277	59,247	294,466	2,006,399	485,997	5,155,564
Governments		3,168,858	499,742	-	750,676	108,667	182,822	546,597	168,438	5,425,800
		3,391,492	1,978,552	153,734	1,204,953	167,914	477,288	2,552,996	654,435	10,581,364
Loans at amortized cost:										
Banks		5,180,244	15,360	108,842	186,618	154,151	627,411	1,215,043	1,238,087	8,725,756
Retail		118,927,400	358,470	4,432	3,440,600	2,119	1,031,270	971,159	650,269	125,385,719
Governments		688,261	-	-	-	-	-	-	2,397	690,658
Corporate		101,731,466	2,473,910	22,770	2,526,494	96,464	1,846,468	2,621,580	5,013,741	116,332,893
Credit cards		4,450	1,247	79	23	7	92,287	16	671	98,780
		226,531,821	2,848,987	136,123	6,153,735	252,741	3,597,436	4,807,798	6,905,165	251,233,806
Loans at FVTPL		645,237	-	-	-	-	-	-	-	645,237
Securities at FVTPL		15,063,058	53,863	158,055	27,064	11,507	-	88,297	87,268	15,489,112
Securities at FVOCI		29,020,711	646,873	21,749	197,234	46,417	392,668	616,143	493,751	31,435,546
Securities at amortized cost		16,081,956	24,689	-	68,594	-	360,953	34,923	253,285	16,824,400
	₩	290,734,275	5,552,964	469,661	7,651,580	478,579	4,828,345	8,100,157	8,393,904	326,209,465

(*1) Geographical breakdown is the net book value, net of unrecognized balances and allowance for doubtful accounts.

(In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(j) Concentration by industry sector

An analysis of concentration by industry sector for financial instruments excluding equity securities, net of allowance, as of December 31, 2019 and 2018 were as follow:

		December 31, 2019								
		Finance and insurance	Manufacturing	Retail and wholesale	Real estate and service	Construction service	Lodging and Restaurant	Other	Retail customers	Total
Due from banks: (*1)										
Banks	₩	4,892,412	-	-	-	-	-	-	-	4,892,412
Government		16,629,285	-	-	-	-	-	-	-	16,629,285
		21,521,697	-	-	-	-	-	-	-	21,521,697
Loans at amortized cost:										
Banks		3,540,249	-	-	-	-	-	489,182	-	4,029,431
Retail		-	-	-	-	-	-	-	138,332,047	138,332,047
Governments		2,425,213	-	-	-	-	-	-	-	2,425,213
Corporate		4,890,090	43,322,353	15,657,794	25,529,632	2,788,758	5,289,617	25,757,409		123,235,653
Credit cards		-	-	-	-	-	-	-	149,920	149,920
		10,855,552	43,322,353	15,657,794	25,529,632	2,788,758	5,289,617	26,246,591	138,481,967	268,172,264
Loans at FVTPL		130,129	478,130	120,432	-	3,500	900	135,900	-	868,991
Securities at FVTPL		12,197,372	1,445,115	859,395	180,444	179,604	55,096	3,685,805	-	18,602,831
Securities at FVOCI		23,143,896	2,172,089	319,380	572,971	707,837	2,779	13,141,782	-	40,060,734
Securities at amortized cost		7,099,533	49,876	-	108,112	120,492	-	12,873,875	-	20,251,888
	₩	74,948,179	47,467,563	16,957,001	26,391,159	3,800,191	5,348,392	56,083,953	138,481,967	369,478,405

(*1) Industrial breakdown is the net book value, net of unrecognized balances and allowance for doubtful accounts.

SHINHAN BANK AND SUBSIDIARIES
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3. Financial risk management (continued)

3-1. Credit risk (continued)

(j) Concentration by industry sector (continued)

An analysis of concentration by industry sector for financial instruments excluding equity securities, net of allowance, as of December 31, 2019 and 2018 were as follow: (continued)

	December 31, 2018								
	Finance and insurance	Manufacturing	Retail and wholesale	Real estate and service	Construction service	Lodging and Restaurant	Other	Retail customers	Total
Due from banks: (*1)									
Banks	₩ 5,155,564	-	-	-	-	-	-	-	5,155,564
Government	5,425,800	-	-	-	-	-	-	-	5,425,800
	10,581,364	-	-	-	-	-	-	-	10,581,364
Loans at amortized cost:									
Banks	8,369,039	2,219	-	300	-	-	354,198	-	8,725,756
Retail	-	-	-	-	-	-	-	125,385,719	125,385,719
Governments	690,658	-	-	-	-	-	-	-	690,658
Corporate	4,618,663	42,921,485	16,119,877	22,832,074	2,666,930	4,894,906	22,278,958	-	116,332,893
Credit cards	-	-	-	-	-	-	-	98,780	98,780
	13,678,360	42,923,704	16,119,877	22,832,374	2,666,930	4,894,906	22,633,156	125,484,499	251,233,806
Loans at FVTPL	62,005	178,827	208,633	20,004	1,000	900	173,868	-	645,237
Securities at FVTPL	10,749,389	824,042	1,032,448	124,471	141,749	60,829	2,556,184	-	15,489,112
Securities at FVOCI	19,383,586	1,468,235	242,857	332,101	357,281	-	9,651,486	-	31,435,546
Securities at amortized cost	4,630,825	99,437	-	61,275	30,454	-	12,002,409	-	16,824,400
	₩ 59,085,529	45,494,245	17,603,815	23,370,225	3,197,414	4,956,635	47,017,103	125,484,499	326,209,465

(*1) Industrial breakdown is the net book value, net of unrecognized balances and allowance for doubtful accounts.

3. Financial risk management (continued)

3-2. Market risk

Market risk is the risk that changes in market price such as interest rates, equity prices, and foreign exchange rates, etc. will affect the Group's income. Trading position is exposed to the risk such as interest rates, equity prices, foreign exchange rates, etc., and non-trading position is mainly exposed to interest rates. The Group separates and manages its exposure to market risk between trading and non-trading position.

Overall authority for market risk is vested in the Risk Policy Committee. The Risk Management Department is responsible for the development of detailed risk management policies which are subject to review and approval by the Risk Policy Committee and for the day-to-day review of their implementation. The Risk Policy Committee also sets Value at Risk (VaR) limit, damage limit, sensitivity limit, investment limits, position limits, and stress damage limits of each department and desk. The Risk Management Department monitors operation departments and reports regularly to the Risk Policy Committee and the Risk Management Committee.

Before launching a new product from each business unit, the Group is required to perform an objective analysis of the risk evaluation and examination of fair value measurement method from the Risk Management Department or Fair Value Evaluation Committee. The Derivative and Structured Product Risk Review Committee reviews the related risk exposure and investment limit.

(a) Market risk management of trading positions

Trading position includes securities, foreign exchange position, and derivatives which are traded for profits.

Trading data of foreign exchange, stocks, bonds and derivatives from trading positions are tracked and daily risk limits are systematically monitored based on the Group's risk management parameters. Statistical analysis that complements the above risk management process and stress testing is performed regularly in order to manage the impact and loss of rapid economic changes. These risk management processes enable the Group to manage the scale of potential losses within a certain range when a crisis occurs.

i) Measurement method on market risk arising from trading positions

The principal tool used to measure and control market risk exposure within the Group's trading position is VaR. The VaR of a trading position is the estimated loss that will arise on the portfolio over a specified period of time (ten days holding period) from an adverse market movement with a specified probability (confidence level). The Group measures market risk based on 99.9% confidence level by using the VaR model based on historical simulation.

VaR is a commonly used market risk management technique. However, VaR estimates possible losses over a certain period at a particular confidence level using the historical market movement data. The use of historical market movement data as a basis for determining the possible range of future outcome may not always cover all possible scenarios, especially those of an exceptional nature. VaR models assume that a holding period of generally one to ten days is sufficient prior to liquidating the underlying positions, but this may not be the case for certain highly illiquid assets or in situations in which there is severe general market illiquidity.

(In millions of won)

3. Financial risk management (continued)

3-2. Market risk (continued)

(a) Market risk management of trading positions (continued)

The Group directly applies the historical changes in interest rates, equity prices, and foreign exchange rates to current position. The actual outputs are regularly monitored by testing the effectiveness of assumptions, measurements and parameter. The application of this method does not prevent loss from larger market movement that exceeds the acceptable parameter.

VaR limit related to the operation of trading and non-trading portfolio is determined by management annually. VaR is measured at least daily. The quality of VaR model is monitored consistently by examining the VaR results related to trading book.

ii) VaR of trading positions

An analysis of trading position VaR for the years ended December 31, 2019 and 2018 were as follows:

		2019			
		Average	Maximum	Minimum	Year-end
Interest rate risk	₩	21,208	32,430	12,709	28,313
Equity risk		18,136	49,424	8,171	15,386
Foreign currency risk (*1)		24,727	29,085	22,259	25,910
Volatility risk		161	325	60	212
Commodity risk		15	104	-	10
Covariance		(16,322)	(29,815)	(11,717)	(21,879)
	₩	47,925	81,553	31,482	47,952

		2018			
		Average	Maximum	Minimum	Year-end
Interest rate risk	₩	22,559	29,748	16,194	18,797
Equity risk		12,118	25,701	1,976	22,212
Foreign currency risk (*1)		39,282	45,738	34,162	34,294
Volatility risk		131	511	30	261
Commodity risk		17	61	-	24
Covariance		(30,150)	(44,297)	(14,337)	(21,298)
	₩	43,957	57,462	38,025	54,290

(*1) The Group measured foreign currency risk arising from trading positions and non-trading positions.

(In millions of won)

3. Financial risk management (continued)

3-2. Market risk (continued)

(b) Market risk management of non-trading positions

The most critical market risk that arises from non-trading position is the interest rate risk. Accordingly, the Group measures and manages market risk for non-trading position by taking into account effects of interest rate changes on both its net asset value and income. Interest rate risk is the risk of loss from fluctuations in the future cash flows or fair values of financial instruments because of a change in market interest rates.

Interest rate risk is managed principally through monitoring interest rate gaps and by having pre-approved limits for repricing bands. The Risk Policy Committee is the monitoring body for compliance with these limits including establishing policies and setting the limits and is assisted by the Risk Management Department in its day-to-day monitoring activities.

The Group measures and manages interest rate risk by using various analyses such as interest rate gap, duration gap, and NII (Net Interest Income) simulation of each scenario through the ALM system (OFSA). The Group also monitors interest rate VaR, earnings at risk ("EaR"), and gap rate of interest rate by setting the limits on a monthly basis.

i) Measurement method on market risk arising from non-trading positions

The Group calculates and manages the variable amount (rateVaR) of the net asset value (rateVaR) and the maximum expected interest loss (rate EaR) when the IRRBB Standard Method Rate Scenario is applied as presented by the Bank for International Settlements (BIS). The IRRBB Standard Method measures the interest rate risk by reflecting customer behavior models.

The Group uses six scenarios defined by the Basel Committee (① parallel up shock ② parallel down shock ③ Steepener shock ④ flattener shock ⑤ short rate up shock ⑥ short rate down shock) for calculating the interest rate risk. Based on six scenarios, the change in the value of the net asset is measured to calculate the maximum loss estimate (VaR: Value at Risk). The maximum expected amount of change in profit or loss (EaR : Earning at Risk) is calculated by measuring the change in net interest margin(economic value of equity) based on two scenarios(parallel up shock and parallel down shock).

ii) Interest rate VaR and EaR for non-trading positions

As of the December 31, 2019, in the IRRBB method based BIS, the existing interest rate VaR and the interest rate EaR are expressed as maximum loss forecast amount of △ EVE (Economic Value of Equity) and expected maximum profit or loss of △ NII (Net Interest Income), respectively. As of December 31, 2018, the value is based on the existing method of calculation as the regulation on the supervision of interest rate leeks was revised at the end of 2019.

		December 31, 2019	December 31, 2018
Interest rate VaR	₩	369,944	301,152
Interest rate EaR		161,385	371,682

(In millions of won)

3. Financial risk management (continued)

3-2. Market risk (continued)

(c) Foreign exchange risk

The Group manages foreign currency risk based on general positions which include all spot and future foreign currency positions, etc. The Risk Policy Committee oversees the Group's foreign exchange exposure for both trading and non-trading activities by establishing limits for the net foreign currencies open position. The Group's foreign exchange position is centralized at the S&T Center. Dealers in the S&T Center manage the Group's overall position within the set limits through spot trading, forward contracts, currency options, futures and swaps and foreign exchange swaps. The Group's foreign exchange transactions are mainly conducted in the U.S. dollar (USD), Japanese yen (JPY), euro (EUR) and Chinese yuan (CNY). Other foreign currencies are traded at smaller scale.

Foreign currency denominated assets and liabilities as of December 31, 2019 and 2018 were as follows:

	December 31, 2019					
	USD	JPY	EUR	CNY	Others	Total
Assets						
Cash and due from banks	₩ 3,396,827	1,486,422	291,647	1,701,072	1,585,448	8,461,416
Securities at FVTPL	910,503	14,205	115,969	-	231,441	1,272,118
Derivative assets	189,134	132	5,947	391	43,596	239,200
Loans at amortized cost	17,137,433	8,253,896	955,836	3,350,557	7,960,677	37,658,399
Securities at FVOCI	4,029,326	83,713	49,447	436,236	730,769	5,329,491
Securities at amortized cost	143,338	183,133	-	40,769	927,713	1,294,953
Other financial assets	2,643,932	136,419	169,709	380,955	436,219	3,767,234
	28,450,493	10,157,920	1,588,555	5,909,980	11,915,863	58,022,811
Liabilities						
Deposits	14,252,401	9,047,067	817,015	4,415,865	6,890,787	35,423,135
Financial liabilities at FVTPL	-	-	-	-	467,761	467,761
Derivative liabilities	147,097	574	10,272	1,158	4,923	164,024
Borrowings	7,689,213	343,308	190,366	407,767	139,658	8,770,312
Debt securities issued	4,918,347	319,041	704,504	-	895,196	6,837,088
Other financial liabilities	3,818,303	154,863	123,547	567,860	964,483	5,629,056
	30,825,361	9,864,853	1,845,704	5,392,650	9,362,808	57,291,376
Net assets (liabilities)	(2,374,868)	293,067	(257,149)	517,330	2,553,055	731,435
Off balance sheet items						
Derivative exposures	2,366,831	(17,970)	370,460	(113,087)	(651,093)	1,955,141
Net position	₩ (8,037)	275,097	113,311	404,243	1,901,962	2,686,576

(In millions of won)

3. Financial risk management (continued)

3-2. Market risk (continued)

(c) Foreign exchange risk (continued)

		December 31, 2018					
		USD	JPY	EUR	CNY	Others	Total
Assets							
Cash and due from banks	₩	3,982,259	1,189,532	198,332	1,582,092	1,472,817	8,425,032
Securities at FVTPL		410,497	-	37,184	-	169,810	617,491
Derivative assets		111,036	285	2,299	406	11,875	125,901
Loans at amortized cost		15,522,744	6,859,420	1,275,174	3,496,937	5,934,618	33,088,893
Securities at FVOCI		2,628,613	125,512	-	357,682	696,230	3,808,037
Securities at amortized cost		116,333	128,512	-	34,955	617,648	897,448
Other financial assets		2,926,663	135,984	70,321	456,405	349,571	3,938,944
		25,698,145	8,439,245	1,583,310	5,928,477	9,252,569	50,901,746
Liabilities							
Deposits		13,016,480	7,207,653	693,052	4,553,334	5,216,302	30,686,821
Financial liabilities at FVTPL		-	-	-	-	458,934	458,934
Derivative liabilities		165,761	-	1,914	2,089	4,892	174,656
Borrowings		5,881,097	444,481	280,949	395,719	167,995	7,170,241
Debt securities issued		4,110,789	317,125	40,933	-	1,103,732	5,572,579
Other financial liabilities		2,621,974	192,161	125,434	573,544	540,510	4,053,623
		25,796,101	8,161,420	1,142,282	5,524,686	7,492,365	48,116,854
Net assets (liabilities)		(97,956)	277,825	441,028	403,791	1,760,204	2,784,892
Off balance sheet items							
Derivative exposures		316,006	(58,204)	(388,554)	(34,075)	(88,718)	(253,545)
Net position	₩	218,050	219,621	52,474	369,716	1,671,486	2,531,347

3. Financial risk management (continued)

3-3. Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Risk Policy Committee is responsible for establishing policies and setting the limits related to liquidity risk management. The Risk Management Department evaluates and manages the Group's overall liquidity risk and monitors compliance of all operating subsidiaries and foreign branches with limits on a daily basis.

The Group applies the following basic principles for liquidity risk management:

- raise funding in sufficient amounts at the optimal time and reasonable costs;
- maintain risk at appropriate levels and preemptively manage them through a prescribed risk limit system and an early warning signal detection system;
- secure stable sources of revenue and minimize actual losses by implementing an effective asset-liability management system based on diversified sources of funding with varying maturities;
- monitor and manage daily and intra-daily liquidity positions and risk exposures as to timely payment and settlement of financial obligations due under both normal and crisis situations;
- conduct periodic contingency analysis in anticipation of any potential liquidity crisis and establish and implement emergency plans in case of a crisis actually happening; and
- consider liquidity-related costs, benefits and risks in determining the price of products and services, employee performance evaluations and approval of launching new products and services.

The Group manages its liquidity risk within the limits set on won and foreign currency by using various analysis methods such as liquidity gap, real liquidity gap and loan-deposit ratio through the ALM system and various indices including risk limits, early warning index, and monitoring index.

The following table presents the Group's cash flows of financial assets and financial liabilities. The amounts disclosed in the table are the contractual undiscounted cash flows. Since the effect of the discount is insignificant for the balance with the maturities of less than 12 months, the amount is the same as the book value.

(In millions of won)

3. Financial risk management (continued)

3-3. Liquidity risk (continued)

(a) Contractual maturities for financial instruments

Contractual maturities for financial assets and financial liabilities as of December 31, 2019 and 2018 were as follows:

		December 31, 2019						
		1 month or less	1 month~ 3 months or less	3 months~ 6 months or less	6 months~ 1 year or less	1 year~ 5 years or less	More than 5 years	Total
Assets								
Cash and due from banks	₩	22,806,554	921,391	274,169	64,955	10,654	-	24,077,723
Securities at FVTPL		16,851,906	1,572,807	55,050	217,286	20,113	-	18,717,162
Derivative assets		1,973,064	48,668	62,652	108,511	605,246	468,125	3,266,266
Loans at amortized cost		17,115,192	28,494,229	39,319,088	66,690,540	84,350,527	63,847,488	299,817,064
Loans at FVTPL		238	659,252	9,758	55,527	156,642	-	881,417
Securities at FVOCI		38,857,291	-	-	-	-	1,906,785	40,764,076
Securities at amortized cost		1,124,894	1,886,432	1,504,340	1,845,395	14,741,435	732,876	21,835,372
Other financial assets		10,535,390	-	1,168	120,583	7,155	2,905,342	13,569,638
	₩	109,264,529	33,582,779	41,226,225	69,102,797	99,891,772	69,860,616	422,928,718
Liabilities								
Deposits	₩	146,595,234	30,679,366	37,192,422	60,082,721	14,138,283	3,550,638	292,238,664
Financial liabilities at FVTPL		437,324	1,096	12,095	10,455	48,609	-	509,579
Derivative liabilities		1,887,965	35,095	45,477	84,498	485,866	321,736	2,860,637
Borrowings		3,882,923	2,850,525	2,430,488	3,395,460	3,836,280	1,214,468	17,610,144
Debt securities issued		2,360,218	3,310,200	3,844,562	6,420,144	20,403,191	3,903,125	40,241,440
Other financial liabilities		17,833,873	32,069	44,942	177,227	21,228	2,539,730	20,649,069
	₩	172,997,537	36,908,351	43,569,986	70,170,505	38,933,457	11,529,697	374,109,533

These amounts include cash flows of principal and interest on financial assets and financial liabilities. The undiscounted cash flows were classified based on the earliest dates for obligated repayment. Financial assets at FVTPL and financial assets at FVOCI except for assets restricted for sale for certain periods were included in 1 month or less.

(In millions of won)

3. Financial risk management (continued)

3-3. Liquidity risk (continued)

(a) Contractual maturities for financial instruments (continued)

		December 31, 2018						
		1 month or less	1 month~ 3 months or less	3 months~ 6 months or less	6 months~ 1 year or less	1 year~ 5 years or less	More than 5 years	Total
Assets								
Cash and due from banks	₩	11,756,787	675,537	673,225	82,202	58	-	13,187,809
Securities at FVTPL		15,612,433	-	-	-	-	-	15,612,433
Derivative assets		1,472,004	50,498	66,815	106,966	495,274	262,007	2,453,564
Loans at amortized cost		22,225,699	26,584,311	38,564,391	60,699,972	74,171,256	60,271,062	282,516,691
Loans at FVTPL		28,221	386,353	39,154	102,394	101,725	-	657,847
Securities at FVOCI		31,466,977	-	-	-	-	411,371	31,878,348
Securities at amortized cost		482,234	1,298,891	396,923	2,061,008	13,527,891	801,152	18,568,099
Other financial assets		13,152,211	-	-	-	-	1,110,556	14,262,767
	₩	96,196,566	28,995,590	39,740,508	63,052,542	88,296,204	62,856,148	379,137,558
Liabilities								
Deposits	₩	132,868,333	23,977,712	33,362,815	54,459,955	14,567,195	2,835,925	262,071,935
Financial liabilities at FVTPL		459,336	193	53	10,403	10,124	-	480,109
Derivative liabilities		1,671,223	40,891	56,711	102,831	523,026	272,663	2,667,345
Borrowings		3,739,100	2,675,305	2,022,551	2,777,822	4,164,139	1,103,572	16,482,489
Debt securities issued		2,402,156	4,023,015	3,917,384	6,779,292	13,497,283	3,399,603	34,018,733
Other financial liabilities		15,377,699	-	-	-	130,122	-	15,507,821
	₩	156,517,847	30,717,116	39,359,514	64,130,303	32,891,889	7,611,763	331,228,432

These amounts include cash flows of principal and interest on financial assets and financial liabilities. The undiscounted cash flows were classified based on the earliest dates for obligated repayment. Financial assets at FVTPL and financial assets at FVOCI except for assets restricted for sale for certain periods were included in 1 month or less.

(b) Contractual maturities for off balance sheet items

Financial guarantees such as financial guarantee contracts, loan commitments and others provided by the Group are classified based on the earliest date at which the Group should fulfil the obligation under the guarantee when the counterparty requests for the payment.

Off balance sheet items as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Financial guarantee contracts	₩	4,676,823	4,391,207
Loan commitments and others		97,161,128	91,002,891
	₩	101,837,951	95,394,098

3. Financial risk management (continued)

3-4. Measurement of fair value

The fair value which the Group primarily uses for measurement of financial instruments are the published price quotations in an active market which are based on the market prices or the dealer price quotations of financial instruments traded in an active market where available, which is the best evidence of fair value.

If the market for a financial instrument is not active, fair value is established either by using a valuation technique or independent third-party valuation service. The Group uses diverse valuation techniques under reasonable assumptions which are based on the inputs observable in markets at the end of each reporting period.

Valuation techniques include using the recent arm's length market transactions between knowledgeable, willing parties, if available, reference to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models. For example, the fair value for interest swaps is the present value of estimated future cash flows, and fair value for foreign exchange forwards contracts is measured by using the published forward exchange rate at the end of each reporting period.

The Group classifies and discloses fair value of the financial instruments into the following three-level hierarchy:

(i) Level 1: Financial instruments measured at quoted prices from active markets are classified as level 1.
(ii) Level 2: Financial instruments measured using valuation techniques where all significant inputs are observable market data are classified as level 2.
(iii) Level 3: Financial instruments measured using valuation techniques where one or more significant inputs are not based on observable market data are classified as level 3.

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value

i) The table below analyzes financial instruments measured at the fair value as of December 31, 2019 and 2018 by the level in the fair value hierarchy into which the fair value measurement is categorized:

		December 31, 2019			
		Level 1	Level 2	Level 3	Total
Financial assets					
Loans at FVTPL:					
Loans	₩	-	686,446	182,545	868,991
Securities at FVTPL:					
Debt securities		1,525,682	15,005,677	1,959,757	18,491,116
Equity securities		62,349	-	50,967	113,316
Gold/silver deposits		111,715	-	-	111,715
Derivative assets:					
Trading		-	1,941,199	4,457	1,945,656
Hedging		-	153,561	2,776	156,337
Securities at FVOCI:					
Debt securities		9,431,530	30,629,204	-	40,060,734
Equity securities		183,078	-	412,093	595,171
	₩	11,314,354	48,416,087	2,612,595	62,343,036
Financial liabilities					
Financial liabilities at FVTPL:					
Securities sold	₩	40,320	-	-	40,320
Gold/silver deposits		467,761	-	-	467,761
Derivative liabilities:					
Trading		197	1,679,316	4,240	1,683,753
Hedging		-	20,329	189,750	210,079
	₩	508,278	1,699,645	193,990	2,401,913

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

		December 31, 2018			
		Level 1	Level 2	Level 3	Total
Financial assets					
Loans at FVTPL:					
Loans	₩	-	407,996	237,241	645,237
Securities at FVTPL:					
Debt securities		1,039,563	13,020,589	1,274,079	15,334,231
Equity securities		79,567	-	43,754	123,321
Gold/silver deposits		154,881	-	-	154,881
Derivative assets:					
Trading		-	1,440,695	2,675	1,443,370
Hedging		-	36,502	4,586	41,088
Securities at FVOCI:					
Debt securities		9,223,783	22,211,763	-	31,435,546
Equity securities		135,815	-	306,987	442,802
	₩	10,633,609	37,117,545	1,869,322	49,620,476
Financial liabilities					
Financial liabilities at FVTPL:					
Securities sold	₩	20,625	-	-	20,625
Gold/silver deposits		458,934	-	-	458,934
Derivative liabilities:					
Trading		953	1,295,021	2,658	1,298,632
Hedging		-	111,833	361,120	472,953
	₩	480,512	1,406,854	363,778	2,251,144

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

ii) There was no transfer between level 1 and level 2 for the years ended December 31, 2019 and 2018.

iii) Changes in level 3 of the fair value hierarchy

Changes in level 3 of the fair value hierarchy for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019				
		Loans at FVTPL	Securities at FVTPL	Securities at FVOCI	Net derivative instruments	Total
Beginning balance	₩	237,241	1,317,833	306,987	(356,517)	1,505,544
Total gain or loss:						
Recognized in profit or loss (*1)		38	29,026	-	106,279	135,343
Recognized in other comprehensive income		-	-	19,531	-	19,531
Purchases/issues		96,171	1,272,266	92,861	(561)	1,460,737
Settlements		(150,905)	(617,047)	-	63,828	(704,124)
Others (*2)		-	-	(7,286)	-	(7,286)
Transfers into level 3 (*3)		-	11,906	-	248	12,154
Transfers from level 3 (*3)		-	(3,260)	-	(34)	(3,294)
Ending balance	₩	182,545	2,010,724	412,093	(186,757)	2,418,605

		December 31, 2018				
		Loans at FVTPL	Securities at FVTPL	Securities at FVOCI	Net derivative instruments	Total
Beginning balance	₩	113,168	841,791	279,560	(418,594)	815,925
Total gain or loss:						
Recognized in profit or loss (*1)		3,012	278,898	-	56,362	338,272
Recognized in other comprehensive income		-	-	27,484	-	27,484
Purchases/issues		187,474	292,109	-	(779)	478,804
Settlements		(66,413)	(94,965)	(57)	6,487	(154,948)
Transfers into level 3 (*3)		-	-	-	7	7
Ending balance	₩	237,241	1,317,833	306,987	(356,517)	1,505,544

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

(*1) Gains or losses among the changes in level 3 of the fair value hierarchy and gains or losses related to financial instruments that the Group held as of December 31, 2019 and 2018 were presented in the consolidated statements of comprehensive income as follows:

		December 31, 2019		December 31, 2018	
		Gains or losses recognized in profit or loss	Gains or losses recognized in profit or loss for financial instrument held at the end of the year	Gains or losses recognized in profit or loss	Gains or losses recognized in profit or loss for financial instrument held at the end of the year
Net gain on financial assets at FVTPL	₩	29,532	28,840	282,700	278,007
Net other operating income		105,811	105,811	55,572	55,572
	₩	135,343	134,651	338,272	333,579

(*2) These financial instruments were reclassified to investments in associates.
(*3) These financial instruments were transferred into or out of level 3 as the availability of observable market data has changed. The Group recognized transfers between levels of the fair value hierarchy at the end of the reporting period during which the event or the change in circumstances that caused the transfer has occurred.

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

iv) Valuation techniques and inputs used in measuring fair value of financial instruments

ⓐ Valuation techniques and inputs used in measuring fair value of financial instruments classified as level 2 as of December 31, 2019 and 2018 were as follows:

	December 31, 2019				
	Type of financial instruments		Book value	Valuation techniques	Inputs
Financial assets					
Loans at FVTPL		₩	686,446	Discounted cash flow	Discount rate
Securities at FVTPL	Debt securities		15,005,677	Discounted cash flow Net asset value	Discount rate Price of underlying assets
Derivative assets	Trading		1,941,199	Option model, Discounted cash flow	Discount rate, foreign exchange rate, volatility, stock price, commodity index, etc.
	Hedging		153,561		
			2,094,760		
Securities at FVOCI	Debt securities		30,629,204	Discounted cash flow	Discount rate
		₩	48,416,087		
Financial liabilities					
Derivative liabilities	Trading	₩	1,679,316	Option model, Discounted cash flow	Discount rate, foreign exchange rate, volatility, stock price, commodity index, etc.
	Hedging		20,329		
		₩	1,699,645		

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

	December 31, 2018				
	Type of financial instruments		Book value	Valuation techniques	Inputs
Financial assets					
Loans at FVTPL		₩	407,996	Discounted cash flow	Discount rate
Securities at FVTPL	Debt securities		13,020,589	Discounted cash flow Net asset value	Discount rate Price of underlying assets
Derivative assets	Trading		1,440,695	Option model, Discounted cash flow	Discount rate, foreign exchange rate, volatility, stock price, commodity index, etc.
	Hedging		36,502		
			1,477,197		
Securities at FVOCI	Debt securities		22,211,763	Discounted cash flow	Discount rate
		₩	37,117,545		
Financial liabilities					
Derivative liabilities	Trading	₩	1,295,021	Option model, Discounted cash flow	Discount rate, foreign exchange rate, volatility, stock price, commodity index, etc.
	Hedging		111,833		
		₩	1,406,854		

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

ⓑ Information about valuation techniques and significant unobservable inputs in measuring financial instruments categorized as level 3 as of December 31, 2019 and 2018 were as follows:

	December 31, 2019					
	Valuation technique	Type of financial instrument		Book value	Significant unobservable input	Range of estimates for unobservable input
Financial assets						
Loans at FVTPL	Option model (*1)	Loans	₩	182,545	Volatility of underlying assets	13.21%~46.36%
Securities at FVTPL	Net asset value method	Debt securities		1,959,757	Price of underlying assets	-
	Discounted cash flow	Equity securities		50,967	Discount rate	5.06%~15.42%
					Terminal growth rate	0.00%
				2,010,724		
Derivative assets	Option model (*2)	Equity and foreign exchange related		2,844	Volatility of underlying assets	1.51%~22.24%
	Option model (*2)	Interest rates related		4,389	Volatility of underlying assets	0.50%~0.67%
					Regression coefficient	1.30%~1.57%
					Correlations	59.53%
				7,233		
Securities at FVOCI	Discounted cash flow	Equity securities		412,093	Discount rate	7.78%~19.21%
					Terminal growth rate	0.00%
			₩	2,612,595		
Financial liabilities						
Derivative liabilities	Option model (*2)	Equity and foreign exchange related	₩	3,141	Volatility of underlying assets	1.51%~22.24%
	Option model (*2)	Interest rates related		190,849	Volatility of underlying assets	0.50%~0.67%
					Regression coefficient	1.30%~2.77%
					Correlations	45.06%~90.34%
			₩	193,990		

(*1) The Group uses binominal tree option model when measuring the fair value for loans at FVTPL.
(*2) Option models that the Group uses in derivative valuation include Black-Scholes model, Hull-White model, Monte Carlo simulation, etc.

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

	December 31, 2018					
	Valuation technique	Type of financial instrument		Book value	Significant unobservable input	Range of estimates for unobservable input
Financial assets						
Loans at FVTPL	Option model (*1)	Loans	₩	237,241	Volatility of underlying assets	16.39%~42.56%
Securities at FVTPL	Net asset value method	Debt securities		1,274,079	Price of underlying assets	-
	Discounted cash flow	Equity securities		43,754	Discount rate Terminal growth rate	5.80%~17.00% 0.00%
				1,317,833		
Derivative assets	Option model (*2)	Equity and foreign exchange related		145	Volatility of underlying assets	2.20%~25.96%
	Option model (*2)	Interest rates related		7,116	Volatility of underlying assets Regression coefficient Correlations	0.47%~0.78% 0.42%~1.65% 44.93%~90.34%
				7,261		
Securities at FVOCI	Discounted cash flow	Equity securities		306,987	Discount rate Terminal growth rate	8.43%~17.40% 0.00%
			₩	1,869,322		
Financial liabilities						
Derivative liabilities	Option model (*2)	Equity and foreign exchange related	₩	257	Volatility of underlying assets	2.20%~25.96%
	Option model (*2)	Interest rates related		363,521	Volatility of underlying assets Regression coefficient Correlations	0.47%~0.78% 0.42%~2.77% 28.15%~90.34%
			₩	363,778		

(*1) The Group uses binominal tree option model when measuring the fair value for loans at FVTPL.
(*2) Option models that the Group uses in derivative valuation include Black-Scholes model, Hull-White model, Monte Carlo simulation, etc.

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

v) Sensitivity to changes in unobservable inputs.

For level 3 fair value measurement, changing one or more of the unobservable inputs used to reasonably possible alternative assumptions would have the following effect on profit (loss), and other comprehensive income (loss) as of December 31, 2019 and 2018 were as follows:

			December 31, 2019			
			Profit (loss) for the year		Other comprehensive income (loss) for the year	
Type of financial instrument			Favorable change	Unfavorable change	Favorable change	Unfavorable change
Loans at FVTPL (*1)		₩	9,925	(3,431)	-	-
Securities at FVTPL (*2)	Debt securities (*3)		790	(534)	-	-
	Equity securities		10,096	(2,485)	-	-
Derivative assets (*1)	Equity and foreign exchange related		9	(9)	-	-
	Interest rates related		543	(1,151)	-	-
Securities at FVOCI (*2)	Equity securities		-	-	16,228	(7,943)
		₩	21,363	(7,610)	16,228	(7,943)
Derivative liabilities (*1)	Equity and foreign exchange related	₩	16	(21)	-	-
	Interest rates related		7,119	(10,597)	-	-
		₩	7,135	(10,618)	-	-

(*1) Based on 10% of increase or decrease in volatility of underlying assets or correlations.
(*2) Based on changes in growth rate (0%~1%) and discount rate (-1%p~1%p).
(*3) ₩1,959,757 million of Securities at FVTPL classified as level 3 are excluded from sensitivity analysis since calculation of sensitivity according to the fluctuation of input variables is impracticable.

			December 31, 2018			
			Profit (loss) for the year		Other comprehensive income (loss) for the year	
Type of financial instrument			Favorable change	Unfavorable change	Favorable change	Unfavorable change
Loans at FVTPL (*1)		₩	8,858	(7,233)	-	-
Securities at FVTPL (*2)	Debt securities (*3)		1,176	(807)	-	-
	Equity securities		3,256	(1,754)	-	-
Derivative assets (*1)	Equity and foreign exchange related		57	(38)	-	-
	Interest rates related		461	(701)	-	-
Securities at FVOCI (*2)	Equity securities		-	-	8,596	(4,843)
		₩	13,808	(10,533)	8,596	(4,843)
Derivative liabilities (*1)	Equity and foreign exchange related	₩	854	(912)	-	-
	Interest rates related		10,186	(10,362)	-	-
		₩	11,040	(11,274)	-	-

(*1) Based on 10% of increase or decrease in volatility of underlying assets or correlations.
(*2) Based on changes in growth rate (0%~1%) and discount rate (-1%p~1%p).
(*3) ₩1,274,079 million of Securities at FVTPL classified as level 3 are excluded from sensitivity analysis since calculation of sensitivity according to the fluctuation of input variables is impracticable.

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost

i) The method of measuring the fair value of financial instruments measured at amortized cost is as follows:

Type	Measurement methods of fair value
Cash and due from banks	The book value and the fair value for cash are identical and most of deposits are floating interest rate deposits or next day deposits of a short-term instrument. Therefore, the book value for deposits approximates fair value.
Loans at amortized cost	The fair value of loans at amortized cost is measured by discounting the expected cash flows at the market interest rate, credit risk, etc.
Securities at amortized cost	The fair value of securities at amortized cost is determined by applying the lesser of two quoted bond prices provided by two bond pricing agencies as of the latest trading date.
Deposits and borrowings	The book amount and the fair value for demand deposits, cash management account deposits, call money and bonds sold under repurchase agreements as short-term instruments are identical. The fair value of others is measured by discounting the contractual cash flows at the market interest rate that takes into account the residual risk.
Debt securities issued	The fair value of deposits and borrowings is based on the published price quotations in an active market. In case there is no observable market price, it is measured by discounting the contractual cash flow at the market interest rate that takes into account the residual risk.

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost (continued)

ii) The book value and the fair value of financial instruments measured at amortized cost as of December 31, 2019 and 2018 were as follows:

		December 31, 2019				
		Book value				
		Balance	Unamortized balance	Allowance	Total	Fair value
Assets						
Cash and due from banks:						
Cash	₩	2,528,135	-	-	2,528,135	2,528,135
Due from banks		21,533,540	-	(11,843)	21,521,697	21,521,697
Loans at amortized cost:						
Household loans		123,219,603	414,301	(294,413)	123,339,491	124,412,436
Corporate loans		139,966,542	81,659	(1,212,105)	138,836,096	139,933,865
Public and other loans		3,189,535	1,843	(13,991)	3,177,387	3,195,896
Loans to bank		2,672,514	-	(3,156)	2,669,358	2,683,959
Credit card receivables		153,436	-	(3,504)	149,932	153,221
Securities at amortized cost:						
Government bonds		12,570,196	-	(1,297)	12,568,899	12,818,958
Financial institutions bonds		3,378,630	-	(1,766)	3,376,864	3,385,515
Corporate bonds and others		4,141,357	-	(2,248)	4,139,109	4,193,185
Others		167,016	-	-	167,016	167,016
Other financial assets		13,569,639	(33,431)	(17,679)	13,518,529	13,533,577
	₩	327,090,143	464,372	(1,562,002)	325,992,513	328,527,460
Liabilities						
Deposits:						
Demand deposits	₩	115,216,336	-	-	115,216,336	115,216,336
Time deposits		153,948,680	-	-	153,948,680	153,983,773
Negotiable certificates of deposits		9,694,816	-	-	9,694,816	9,701,825
Note discount deposits		4,747,587	-	-	4,747,587	4,747,425
CMA (*1)		3,987,372	-	-	3,987,372	3,987,372
Others		20,478	-	-	20,478	20,477
Borrowings:						
Call money		538,247	-	-	538,247	538,247
Bill sold		19,070	-	-	19,070	19,035
Bonds sold under repurchase agreements		103,489	-	-	103,489	103,489
Borrowings		16,666,089	(1,011)	-	16,665,078	16,797,478
Debt securities issued:						
Debt securities issued in Korean won		31,267,846	(40,736)	-	31,227,110	31,516,933
Debt securities issued in foreign currencies		6,837,089	(34,331)	-	6,802,758	6,900,373
Other financial liabilities		20,658,284	(25,109)	-	20,633,175	20,643,591
	₩	363,705,383	(101,187)	-	363,604,196	364,176,354

(*1) CMA: Cash management account deposits

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost (continued)

		December 31, 2018				
		Book value				
		Balance	Unamortized balance	Allowance	Total	Fair value
Assets						
Cash and due from banks:						
Cash	₩	2,568,913	-	-	2,568,913	2,568,913
Due from banks		10,596,149	-	(14,785)	10,581,364	10,581,364
Loans at amortized cost:						
Household loans		112,594,439	418,020	(305,288)	112,707,171	113,677,417
Corporate loans		133,399,567	76,685	(1,339,174)	132,137,078	133,163,232
Public and other loans		2,729,075	1,558	(20,053)	2,710,580	2,733,532
Loans to bank		3,586,594	-	(6,395)	3,580,199	3,581,605
Credit card receivables		103,580	-	(4,802)	98,778	103,175
Securities at amortized cost:						
Government bonds		11,695,562	-	(1,454)	11,694,108	11,793,483
Financial institutions bonds		929,757	-	(357)	929,400	931,157
Corporate bonds and others		4,129,043	-	(2,953)	4,126,090	4,165,754
Others		74,802	-	-	74,802	74,802
Other financial assets		14,262,768	(36,355)	(25,612)	14,200,801	14,218,601
	₩	296,670,249	459,908	(1,720,873)	295,409,284	297,593,035
Liabilities		296,670,249	459,908	(1,720,873)	295,409,284	297,593,035
Deposits:						
Demand deposits	₩	104,998,305	-	-	104,998,305	104,998,305
Time deposits		135,486,566	-	-	135,486,566	135,414,254
Negotiable certificates of deposits		9,213,652	-	-	9,213,652	9,265,012
Note discount deposits		4,087,529	-	-	4,087,529	4,087,338
CMA (*1)		4,084,709	-	-	4,084,709	4,084,709
Others		21,963	-	-	21,963	21,963
Borrowings:						
Call money		960,162	-	-	960,162	960,162
Bill sold		14,536	-	-	14,536	14,506
Bonds sold under repurchase agreements		83,028	-	-	83,028	83,028
Borrowings		15,098,953	(1,858)	-	15,097,095	15,163,551
Debt securities issued:						
Debt securities issued in Korean won		26,418,732	(62,944)	-	26,355,788	26,625,655
Debt securities issued in foreign currencies		5,572,580	(29,102)	-	5,543,478	5,345,938
Other financial liabilities		15,462,193	(2,118)	-	15,460,075	15,443,585
	₩	321,502,908	(96,022)	-	321,406,886	321,508,006

(*1) CMA: Cash management account deposits

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost (continued)

iii) Fair value hierarchy of financial instruments which are not measured at fair value in the consolidated statements of financial position as of December 31, 2019 and 2018 were as follows:

		December 31, 2019			
		Level 1	Level 2	Level 3	Total
Assets					
Cash and due from banks:					
Cash	₩	2,528,135	-	-	2,528,135
Due from banks		-	21,521,697	-	21,521,697
Loans at amortized cost:					
Household loans		-	-	124,412,436	124,412,436
Corporate loans		-	-	139,933,865	139,933,865
Public and other loans		-	-	3,195,896	3,195,896
Loans to bank		-	1,011,760	1,672,199	2,683,959
Credit card receivables		-	-	153,221	153,221
Securities at amortized cost:					
Government bonds		1,234,229	11,584,729	-	12,818,958
Financial institutions bonds		2,252,484	1,133,031	-	3,385,515
Corporate bonds and others		-	4,193,185	-	4,193,185
Others		-	167,016	-	167,016
Other financial assets		-	10,813,821	2,719,756	13,533,577
	₩	6,014,848	50,425,239	272,087,373	328,527,460
Liabilities					
Deposits:					
Demand deposits	₩	-	115,216,336	-	115,216,336
Time deposits		-	-	153,983,773	153,983,773
Negotiable certificates of deposits		-	-	9,701,825	9,701,825
Note discount deposits		-	-	4,747,425	4,747,425
CMA		-	3,987,372	-	3,987,372
Others		-	-	20,477	20,477
Borrowings:					
Call money		-	538,247	-	538,247
Bill sold		-	-	19,035	19,035
Bonds sold under repurchase agreements		-	-	103,489	103,489
Borrowings		-	-	16,797,478	16,797,478
Debt securities issued:					
Debt securities issued in Korean won		-	29,459,639	2,057,294	31,516,933
Debt securities issued in foreign currencies		-	6,900,373	-	6,900,373
Other financial liabilities		-	7,932,723	12,710,868	20,643,591
	₩	-	164,034,690	200,141,664	364,176,354

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost (continued)

		December 31, 2018			
		Level 1	Level 2	Level 3	Total
Assets					
Cash and due from banks:					
Cash	₩	2,568,913	-	-	2,568,913
Due from banks		-	10,581,364	-	10,581,364
Loans at amortized cost:					
Household loans		-	-	113,677,417	113,677,417
Corporate loans		-	-	133,163,232	133,163,232
Public and other loans		-	-	2,733,532	2,733,532
Loans to bank		-	2,499,812	1,081,793	3,581,605
Credit card receivables		-	-	103,175	103,175
Securities at amortized cost:					
Government bonds		768,812	11,024,671	-	11,793,483
Financial institutions bonds		719,925	211,232	-	931,157
Corporate bonds and others		-	4,165,754	-	4,165,754
Others		-	74,802	-	74,802
Other financial assets		-	11,606,370	2,612,231	14,218,601
	₩	4,057,650	40,164,005	253,371,380	297,593,035
Liabilities					
Deposits:					
Demand deposits	₩	-	104,998,305	-	104,998,305
Time deposits		-	-	135,414,254	135,414,254
Negotiable certificates of deposits		-	-	9,265,012	9,265,012
Note discount deposits		-	-	4,087,338	4,087,338
CMA		-	4,084,709	-	4,084,709
Others		-	-	21,963	21,963
Borrowings:					
Call money		-	960,162	-	960,162
Bill sold		-	-	14,506	14,506
Bonds sold under repurchase agreements		-	-	83,028	83,028
Borrowings		-	-	15,163,551	15,163,551
Debt securities issued:					
Debt securities issued in Korean won		-	23,756,717	2,868,938	26,625,655
Debt securities issued in foreign currencies		-	5,345,938	-	5,345,938
Other financial liabilities		-	6,630,726	8,812,859	15,443,585
	₩	-	145,776,557	175,731,449	321,508,006

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost (continued)

iv) For financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed, valuation techniques and inputs used in measuring fair value of financial instruments classified as level 2 or level 3 as of December 31, 2019 and 2018 were as follows :

	December 31, 2019				
Level	Type of financial instrument		Fair value (*1)	Valuation technique	Inputs
Level 2	Securities at amortized cost	₩	17,077,961	Discounted cash flow	Discount rate
Level 3	Loans at amortized cost		269,367,617		Discount rate, Credit spread, Prepayment rate
	Other financial assets		2,719,756		Discount rate
		₩	289,165,334		
Level 2	Debt securities issued	₩	36,360,012	Discounted cash flow	Discount rate
Level 3	Deposits (*1)		167,085,475		Discount rate
	Borrowings (*1)		11,797,989		Discount rate
	Debt securities issued		2,057,294		Discount rate, Regression coefficient, Correlation coefficient
	Other financial liabilities		12,710,868		Discount rate
		₩	230,011,638		

(*1) The amounts, which were not evaluated by the valuation technique, are not included and disclosed because the carrying amount is the reasonable approximation of fair value.

	December 31, 2018				
Level	Type of financial instrument		Fair value (*1)	Valuation technique	Inputs
Level 2	Securities at amortized cost	₩	15,476,459	Discounted cash flow	Discount rate
Level 3	Loans at amortized cost		250,759,149		Discount rate, Credit spread, Prepayment rate
	Other financial assets		2,612,231		Discount rate
		₩	268,847,839		
Level 2	Debt securities issued	₩	29,102,655	Discounted cash flow	Discount rate
Level 3	Deposits (*1)		147,759,425		Discount rate
	Borrowings (*1)		10,380,014		Discount rate
	Debt securities issued		2,868,938		Discount rate, Regression coefficient, Correlation coefficient
	Other financial liabilities		8,812,859		Discount rate
		₩	198,923,891		

(*1) The amounts, which were not evaluated by the valuation technique, are not included and disclosed because the carrying amount is the reasonable approximation of fair value.

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(c) Deferred day one profit or loss for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019			
		Beginning balance	Deferred	Amortization	Ending balance
Loans at FVTPL	₩	(4,510)	(3,825)	2,582	(5,753)
Securities at FVTPL		4	2	(6)	-
	₩	(4,506)	(3,823)	2,576	(5,753)

		December 31, 2018			
		Beginning balance	Deferred	Amortization	Ending balance
Loans at FVTPL	₩	(4,929)	(2,506)	2,925	(4,510)
Securities at FVTPL		-	4	-	4
	₩	(4,929)	(2,502)	2,925	(4,506)

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(d) Classification by category of financial instruments

Financial assets and liabilities were measured at fair value or amortized cost. Financial instruments measured at fair value or amortized costs were measured in accordance with the Group's valuation methodologies, which were described in Note 2.

The carrying amounts of each category of financial instruments as of December 31, 2019 and 2018 were as follows:

		December 31, 2019					
		Financial assets at FVTPL	Financial assets at FVOCI	Financial assets designated at FVOCI	Financial assets at amortized cost	Derivatives held for hedging	Total
Assets							
Due from banks	₩	-	-	-	21,521,697	-	21,521,697
Securities at FVTPL		18,716,147	-	-	-	-	18,716,147
Derivative assets		1,945,656	-	-	-	156,337	2,101,993
Loans at FVTPL		868,991	-	-	-	-	868,991
Loans at amortized cost		-	-	-	268,172,264	-	268,172,264
Securities at FVOCI		-	40,060,734	595,171	-	-	40,655,905
Securities at amortized cost		-	-	-	20,251,888	-	20,251,888
Other financial assets		-	-	-	13,518,528	-	13,518,528
	₩	21,530,794	40,060,734	595,171	323,464,377	156,337	385,807,413

		Financial liabilities at FVTPL	Financial liabilities at amortized cost	Derivatives held for hedging	Total
Liabilities					
Deposits	₩	-	287,615,269	-	287,615,269
Financial liabilities at FVTPL		508,081	-	-	508,081
Derivative liabilities		1,683,753	-	210,079	1,893,832
Borrowings		-	17,325,884	-	17,325,884
Debt securities issued		-	38,029,868	-	38,029,868
Other financial liabilities		-	20,633,175	-	20,633,175
	₩	2,191,834	363,604,196	210,079	366,006,109

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(d) Classification by category of financial instruments (continued)

		December 31, 2018					
		Financial assets at FVTPL	Financial assets at FVOCI	Financial assets designated at FVOCI	Financial assets at amortized cost	Derivatives held for hedging	Total
Assets							
Due from banks	₩	-	-	-	10,581,364	-	10,581,364
Securities at FVTPL		15,612,433	-	-	-	-	15,612,433
Derivative assets		1,443,371	-	-	-	41,087	1,484,458
Loans at FVTPL		645,237	-	-	-	-	645,237
Loans at amortized cost		-	-	-	251,233,806	-	251,233,806
Securities at FVOCI		-	31,435,546	442,802	-	-	31,878,348
Securities at amortized cost		-	-	-	16,824,400	-	16,824,400
Other financial assets		-	-	-	14,200,801	-	14,200,801
	₩	17,701,041	31,435,546	442,802	292,840,371	41,087	342,460,847

		Financial liabilities at FVTPL	Financial liabilities at amortized cost	Derivatives held for hedging	Total
Liabilities					
Deposits	₩	-	257,892,724	-	257,892,724
Financial liabilities at FVTPL		479,559	-	-	479,559
Derivative liabilities		1,298,632	-	472,953	1,771,585
Borrowings		-	16,154,821	-	16,154,821
Debt securities issued		-	31,899,266	-	31,899,266
Other financial liabilities		-	15,460,075	-	15,460,075
	₩	1,778,191	321,406,886	472,953	323,658,030

There were no financial assets and financial liabilities that were reclassified between financial instruments during the years ended December 31, 2019 and 2018.

(In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(e) Financial instruments income and costs by category for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019					
		Interest income (expense)	Fees and commission income (expense)	Reversal of (provision for) credit loss allowance	Others	Total	Other comprehensive income (loss)
Securities at FVTPL	₩	290,274	10,327	-	223,630	524,231	-
Securities at FVOCI		716,463	-	(4,113)	129,410	841,760	157,663
Securities at amortized cost		466,706	-	(578)	-	466,128	-
Loans at FVTPL		16,254	-	-	13,213	29,467	-
Loans at amortized cost		8,972,855	80,341	(367,969)	(13,750)	8,671,477	-
Other financial assets		192,180	150,372	(1,556)	-	340,996	-
Financial liabilities at FVTPL		-	(52)	-	-	(52)	-
Financial liabilities at amortized cost		(4,782,945)	(76)	-	(380,429)	(5,163,450)	(47,755)
Net derivatives held for hedging		-	-	-	374,794	374,794	(1,708)
Allowance for off balance sheet items		-	-	(2,652)	-	(2,652)	-
	₩	5,871,787	240,912	(376,868)	346,868	6,082,699	108,200

		December 31, 2018					
		Interest income (expense)	Fees and commission income (expense)	Reversal of (provision for) credit loss allowance	Others	Total	Other comprehensive income (loss)
Securities at FVTPL	₩	221,569	10,403	-	348,809	580,781	-
Securities at FVOCI		607,771	-	(8,395)	27,264	626,640	165,538
Securities at amortized cost		403,707	-	1,122	-	404,829	-
Loans at FVTPL		12,462	-	-	13,827	26,289	-
Loans at amortized cost		8,184,956	73,870	(245,113)	25,999	8,039,712	-
Other financial assets		166,259	113,306	1,400	-	280,965	-
Financial liabilities at FVTPL		-	(18)	-	-	(18)	-
Financial liabilities at amortized cost		(4,010,730)	(126)	-	(75,693)	(4,086,549)	(36,383)
Net derivatives held for hedging		-	-	-	75,757	75,757	505
Allowance for off balance sheet items		-	-	7,847	-	7,847	-
	₩	5,585,994	197,435	(243,139)	415,963	5,956,253	129,660

3. Financial risk management (continued)

3-5. Capital risk management

Capital regulations applicable to banks were adopted in 1988, which focused primarily on capital adequacy and asset soundness as a measure of risk. Building upon the initial Basel Capital Accord of 1988, capital regulations were developed to reflect additional risks as well. For the purpose of improving risk management and increasing capital adequacy of banks, capital adequacy standards based on the new Basel Capital Accord (Basel III) was implemented by the Financial Services Commission regulations beginning on December 1, 2013. Under these regulations, all domestic banks including the Group are required to maintain a capital adequacy ratio of 8% or above and report whether the Group meet the capital adequacy ratio to the Financial Services Commission.

Under *the Banking Act*, the capital of a bank is divided into two categories.

(a) Tier 1 capital (Common equity Tier 1 capital + Additional Tier 1 capital)
i) Common equity Tier 1 capital: Common equity Tier 1 capital consists of capital stock, capital surplus, retained earnings (excluding regulatory reserve for loan loss), accumulated other comprehensive income, other disclosed reserves, and non-controlling interests that meet certain criteria.
ii) Additional Tier 1 capital: Additional Tier 1 capital consists of equity instrument that meet certain criteria for perpetual nature of the equity instrument, any related capital surplus, instruments issued by consolidated subsidiaries of the Bank and held by third parties that meet certain criteria.

(b) Tier 2 capital (Supplementary capital)
Tier 2 capital consists of instruments that meet certain criteria for loss absorption in case of liquidation, any related capital surplus, and instruments issued by consolidated subsidiaries of the Bank and held by third parties that meet certain criteria.

The capital adequacy ratio of the Group is calculated by ratios of Tier 1 and Tier 2 capital (less any capital deductions) to risk-weighted assets. Pursuant to Basel III, operational risk, such as inadequate procedures, loss risk by employees, internal systems, occurrence of unexpected events, as well as credit risk, market risk and additional risk are taken into account in calculating the risk-weighted assets.

The Group evaluates and manages the capital adequacy ratio pursuant to internally developed standards. It means that the Group assesses whether the level on ratio of available capital to economic capital is sufficient, or not. The Group manages the economic adequacy by the amount of each risk type including credit, market, operation, interest rate, liquidity, concentration, and foreign currency settlement risk, as well as the total amounts of all of those risk types.

(In millions of won)

3. Financial risk management (continued)

3-5. Capital risk management (continued)

Details of capital categories and the capital adequacy ratio of the Group as of December 31, 2019 and 2018 were as follows:

Category		December 31, 2019	December 31, 2018
Capital:			
Common equity Tier 1 capital	₩	23,159,278	22,113,697
Additional Tier 1 capital		997,987	698,660
Tier 1 capital		24,157,265	22,812,357
Tier 2 capital		4,747,850	4,687,083
	₩	28,905,115	27,499,440
Risk-weighted assets:			
Credit risk-weighted assets (*1)	₩	163,937,574	154,994,030
Market risk-weighted assets		7,663,130	7,227,874
Operating risk-weighted assets		10,036,197	9,371,300
	₩	181,636,901	171,593,204
Capital adequacy ratio:			
Common equity Tier 1 capital ratio		12.75%	12.89%
Tier 1 capital ratio		13.30%	13.29%
Tier 2 capital ratio		2.61%	2.73%
Total capital ratio		15.91%	16.03%

(*1) The additional risk weighted assets resulting from the insufficient capital under capital floor is included in credit risk-weighted assets.

Pursuant to related regulations, the Group shall maintain the total capital ratio at 8.0% or above, Tier 1 capital ratio at 6.0% or above and common equity capital ratio at 4.5% or above. In 2016, the minimum regulatory BIS capital requirement to be met by 2019 was raised to 14% due to the enforcement of Basel III capital regulations. This is due to the additions of capital conservation buffer (2.5%p), additional capital buffer for Domestic Systemically Important Bank ("D-SIB") (1.0%p) and countercyclical capital buffer (2.5%p) to the existing minimum capital ratio. Capital conservation buffer and additional capital buffer for D-SIB will be adjusted upwards by 25%p per year through 2019 based on transitional arrangements. The addition of countercyclical capital buffer can be used up to a maximum of the buffer rate of 2.5%p in a period of excess aggregate credit growth. The minimum regulatory BIS capital ratio to be complied with as of the end of 2019 is 11.5%, which is due to the increases of 2.5%p for capital conservation buffer, 1.0%p for additional capital buffer for D-SIB, and 0%p for countercyclical capital buffer, respectively.

(In millions of won)

3. Financial risk management (continued)

3-6. Transaction as a transfer of financial instrument

(a) Transfers financial assets that were not derecognized

i) Bonds sold under repurchase agreements at a fixed price as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Transferred assets:			
Securities at FVOCI	₩	124,801	50,289
Securities at amortized cost		126,144	156,066
	₩	250,945	206,355
Associated liabilities:			
Bonds sold under repurchase agreements	₩	103,489	83,028

ii) When the Group's securities are transferred, the Group transfers the ownership of the securities, but upon the termination, the Group will have to return the securities. As a result, securities loaned as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018	Lender
Securities at FVOCI:				
Government bonds	₩	1,115,115	595,149	Korea Securities Finance Corp., Korea Securities Depository
Financial institutions bonds		349,987	319,770	Korea Securities Finance Corp., Korea Securities Depository
Securities at amortized cost:				
Government bonds		114,969	40,149	Korea Securities Finance Corp., Korea Securities Depository
Financial institutions bonds		110,065	90,060	Korea Securities Finance Corp., Korea Securities Depository
	₩	1,690,136	1,045,128	

(b) Financial instruments that were qualified for derecognition but under continuing involvement.

There are no financial instrument that meets the conditions of derecognition and in which the Group has continuing involvement as of December 31, 2019 and 2018.

(In millions of won)

3. Financial risk management (continued)

3-7. Offsetting financial assets and financial liabilities

Details of financial assets and financial liabilities subject to offsetting, enforceable master netting agreements and similar agreements as of December 31, 2019 and 2018 were as follows:

		December 31, 2019					
		Gross amounts of recognized financial assets and liabilities	Gross amounts of recognized financial assets and liabilities set off in the statement of financial position	Net amounts of financial assets and liabilities presented in the statement of financial position	Related amounts not set off in the statement of financial position		Net amount
					Financial instruments	Cash collateral received	
Financial assets							
Derivative assets (*1)	₩	2,092,001	-	2,092,001	7,857,555	11,252	1,358,251
Other financial assets (*1)		7,135,057	-	7,135,057			
Bonds sold under repurchase agreements related collateral of securities (*2)		250,945	-	250,945	103,489	-	147,456
Bonds purchased under resale agreement (Loans) (*2)		1,771,033	-	1,771,033	1,770,855	-	178
Securities lent (*2)		1,690,136	-	1,690,136	1,690,136	-	-
Domestic exchange settlements receivables (*3)		31,027,416	26,820,045	4,207,371	-	-	4,207,371
Receivable from disposal of securities, etc. (*4)		25,807	1,133	24,674	-	-	24,674
	₩	43,992,395	26,821,178	17,171,217	11,422,035	11,252	5,737,930
Financial liabilities							
Derivative liabilities (*1)	₩	1,846,579	-	1,846,579	7,630,938	-	341,924
Other financial liabilities (*1)		6,126,283	-	6,126,283			
Bonds sold under repurchase agreements (Borrowings) (*2)		103,489	-	103,489	103,489	-	-
Securities sold		40,321	-	40,321	40,321	-	-
Domestic exchange settlement payables (*3)		28,150,544	26,820,045	1,330,499	1,330,499	-	-
Payable from purchase of securities, etc. (*4)		1,606	1,133	473	473		-
	₩	36,268,822	26,821,178	9,447,644	9,105,720	-	341,924

(*1) The Group has certain derivative transactions subject to the ISDA (International Swaps and Derivatives Association) agreement. According to the ISDA agreement, when credit events (e.g. default) of counterparties occur, the net amount after offsetting the amounts obligated by each party is settled.
(*2) Resale and repurchase agreement, securities borrowing and lending agreement are also similar to ISDA agreement with respect to enforceable netting agreements.
(*3) The Group has legally enforceable right to set off and settles financial assets and liabilities on a net basis. Therefore, domestic exchanges settlement receivables (payables) are recorded on a net basis in the consolidated statements of financial position.
(*4) Receivables and payables related to settlement of purchase and disposition of enlisted securities are offset and the net amount is presented in the consolidated statement of financial position because the Group currently has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis. The effect of offsetting due to the establishment of 'Central Counter Party ("CCP")' system is included in the amount.

(In millions of won)

3. Financial risk management (continued)

3-7. Offsetting financial assets and financial liabilities (continued)

		December 31, 2018					
		Gross amounts of recognized financial assets and liabilities	Gross amounts of recognized financial assets and liabilities set off in the statement of financial position	Net amounts of financial assets and liabilities presented in the statement of financial position	Related amounts not set off in the statement of financial position: Financial instruments	Related amounts not set off in the statement of financial position: Cash collateral received	Net amount
Financial assets							
Derivative assets (*1)	₩	1,481,678	-	1,481,678	6,594,662	7,396	957,276
Other financial assets (*1)		6,077,656	-	6,077,656			
Bonds sold under repurchase agreements related collateral of securities (*2)		206,356	-	206,356	83,028	-	123,328
Bonds purchased under resale agreement (Loans) (*2)		4,720,281	-	4,720,281	4,720,281	-	-
Securities lent (*2)		1,045,128	-	1,045,128	1,045,128	-	-
Domestic exchange settlements receivables (*3)		32,337,320	26,344,937	5,992,383	-	-	5,992,383
Receivable from disposal of securities, etc. (*4)		22,906	519	22,387	-	-	22,387
	₩	45,891,325	26,345,456	19,545,869	12,443,099	7,396	7,095,374
Financial liabilities							
Derivative liabilities (*1)	₩	1,757,177	-	1,757,177	6,795,260	-	280,055
Other financial liabilities (*1)		5,318,138	-	5,318,138			
Bonds sold under repurchase agreements (Borrowings) (*2)		83,028	-	83,028	83,028	-	-
Securities sold		20,625	-	20,625	20,625	-	-
Domestic exchange settlement payables (*3)		27,361,193	26,344,937	1,016,256	1,016,256	-	-
Payable from purchase of securities, etc. (*4)		552	519	33	33	-	-
	₩	34,540,713	26,345,456	8,195,257	7,915,202	-	280,055

(*1) The Group has certain derivative transactions subject to the ISDA (International Swaps and Derivatives Association) agreement. According to the ISDA agreement, when credit events (e.g. default) of counterparties occur, the net amount after offsetting the amounts obligated by each party is settled.
(*2) Resale and repurchase agreement, securities borrowing and lending agreement are also similar to ISDA agreement with respect to enforceable netting agreements.
(*3) The Group has legally enforceable right to set off and settles financial assets and liabilities on a net basis. Therefore, domestic exchanges settlement receivables (payables) are recorded on a net basis in the consolidated statements of financial position.
(*4) Receivables and payables related to settlement of purchase and disposition of enlisted securities are offset and the net amount is presented in the consolidated statement of financial position because the Group currently has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis. The effect of offsetting due to the establishment of 'Central Counter Party ("CCP")' system is included in the amount.

4. Significant estimates and judgments

The preparation of consolidated financial statements requires the application of certain critical estimates and judgments relative to the future. Management's estimated outcomes may differ from actual outcomes. The change in an accounting estimate is recognized prospectively in profit or loss in the period of the change, if the change affects that period only, or the period of the change and future periods, if the change affects both.

(a) Income taxes

The Group is subject to tax laws from various countries. In the normal course of business, there are various types of transactions and different accounting methods that may add uncertainties to the decision of the final income taxes. The Group has recognized current and deferred taxes that reflect tax consequences based on the best estimates in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities. However, actual income taxes in the future may not be identical to the recognized deferred tax assets and liabilities, and this difference can affect current and deferred tax at the period when the final tax effect is determined.

(b) Fair value of financial instruments

The fair values of financial instruments which are not actively traded in the market are determined by using valuation techniques. The Group determines valuation techniques and assumptions based on significant market conditions at the end of each reporting period. Diverse valuation techniques are used to determine the fair value of financial instruments, from generic valuation techniques to internally developed valuation models that incorporate various types of assumptions and variables.

(c) Allowances for loan losses, guarantees and unused loan commitments

The Group determines and recognizes allowances for losses on debt securities, loans and other receivables measured at amortized cost or FVOCI, and recognizes provisions for guarantees and unused loan commitments through impairment testing. The accuracy of allowances for credit losses is determined by the estimation of expected cash flows for individually assessed allowances, and methodology and assumptions used for collectively assessed allowances and provisions for groups of loans, guarantees and unused loan commitments.

(d) Defined benefit obligation

The present value of a defined benefit obligation that is measured by actuarial valuation methods uses various assumptions which can change according to various elements. The rate used to discount post-employment benefit obligations is determined by reference to market yields at the end of the reporting period on high quality corporate bonds. The currency and term of the corporate bonds are consistent with the currency and estimated term of the post-employment benefit obligations. Actuarial gains and losses including experience adjustments and the effects of changes in actuarial assumptions are recognized in other comprehensive income. Other significant assumptions related to defined benefit obligations are based on current market situations.

(In millions of won)

5. Operating segments

(a) The general descriptions of the Group's operating segments as of December 31, 2019 and 2018 were as follows:

The Group has four reportable segments which are strategic business units. Each of these segments is providing different services and managed separately.

Description	Area of business
Retail banking	Loans to or deposits from individual customers, wealth management customers, and institutions such as hospitals, airports and schools.
Corporate banking	Loans to or deposits from corporations, including small or medium sized companies and businesses related to investment banking.
International group	Supervision of overseas subsidiaries and branch operations and other international businesses.
Others	Treasury management, trading of securities and derivatives, administration of bank operations and merchant banking account.

(b) The following table provides information of financial performance of each reportable operating segment for the years ended December 31, 2019 and 2018.

		2019					
		Retail banking (*1)	Corporate banking (*1)	International group	Others	Consolidation adjustments	Total
Net interest income	₩	2,501,567	2,353,385	746,410	266,808	3,617	5,871,787
Net fees and commission income (expense)		446,629	495,103	102,046	80,285	(6,671)	1,117,392
Net other expense (*2)		(1,773,404)	(774,315)	(375,411)	(801,276)	(1,470)	(3,725,876)
Operating income (expense)		1,174,792	2,074,173	473,045	(454,183)	(4,524)	3,263,303
Net non-operating income (expenses) (*3)		(203,064)	(19,215)	(3,368)	41,470	(1,453)	(185,630)
Share of loss of associates		-	-	-	-	(763)	(763)
Profit (loss) before income tax		971,728	2,054,958	469,677	(412,713)	(6,740)	3,076,910
Income tax expense (benefit)		(239,654)	(506,920)	(104,240)	100,605	2,567	(747,642)
Profit (loss) for the year	₩	732,074	1,548,038	365,437	(312,108)	(4,173)	2,329,268
Attributable to:							
Equity holder of the Bank	₩	732,074	1,548,038	365,437	(312,108)	(4,249)	2,329,192
Non-controlling interests		-	-	-	-	76	76

(*1) SOHO segment was reclassified from retail banking to corporate banking during the year
(*2) Effects of hedging on net investments in foreign operations were included.
(*3) Net non-operating income (expenses) of the retail banking segment included ₩151,523 million in impairment losses for intangible assets recognized in relation to the right to be the depository bank of municipal and provincial governments.

(In millions of won)

5. Operating segments (continued)

(b) The following table provides information of financial performance of each reportable operating segment for the years ended December 31, 2019 and 2018. (continued)

		2018					
		Retail Banking (*1)	Corporate Banking (*1)	International group	Others	Consolidation adjustments	Total
Net interest income	₩	2,508,207	2,281,861	629,038	163,899	2,989	5,585,994
Net fees and commission income (expense)		447,306	452,225	99,272	43,258	(5,528)	1,036,533
Net other expense (*2)		(1,995,823)	(821,730)	(289,296)	(349,919)	(1,073)	(3,457,841)
Operating income (expense)		959,690	1,912,356	439,014	(142,762)	(3,612)	3,164,686
Net non-operating income (expenses)		(36,465)	(30,214)	(1,871)	120,301	(69,056)	(17,305)
Share of loss of associates		-	-	-	-	(977)	(977)
Profit (loss) before income tax		923,225	1,882,142	437,143	(22,461)	(73,645)	3,146,404
Income tax expense		(247,181)	(503,983)	(108,572)	2,688)	(9,994)	(867,042)
Profit (loss) for the year	₩	676,044	1,378,159	328,571	(19,773)	(83,639)	2,279,362
Attributable to:							
Equity holder of the Bank	₩	676,044	1,378,159	328,571	(19,773)	(83,952)	2,279,049
Non-controlling interests		-	-	-	-	313	313

(*1) The information was recasted because the composition of reportable segment changed during the year ended December 31, 2019.
(*2) Effects of hedging on net investments in foreign operations were included.

(In millions of won)

5. Operating segments (continued)

(c) The following table provides information of net interest income of each reportable operating segment from external consumers and net interest income (expenses) between operating segments for the years ended December 31, 2019 and 2018.

		2019					
		Retail Banking (*1)	Corporate Banking (*1)	International group	Others	Consolidation adjustments	Total
Net interest income of each operating segment from external consumers	₩	2,176,265	2,778,207	802,205	115,110	-	5,871,787
Net interest income (expenses) between operating segments		325,302	(424,822)	(55,795)	151,698	3,617	-
	₩	2,501,567	2,353,385	746,410	266,808	3,617	5,871,787

(*1) SOHO segment was reclassified from retail banking to corporate banking during the year.

		2018					
		Retail Banking (*1)	Corporate Banking (*1)	International group	Others	Consolidation adjustments	Total
Net interest income of each operating segment from external consumers	₩	2,794,262	1,819,726	688,540	283,466	-	5,585,994
Net interest income (expenses) between operating segments		(286,055)	462,135	(59,502)	(119,567)	2,989	-
		2,508,207	2,281,861	629,038	163,899	2,989	5,585,994

(*1) It was restated as the composition of reportable segment changed during the year ended December 31, 2019.

(d) Financial information of geographical area

i) The following table provides information of operating income from external consumers by geographical area for the years ended December 31, 2019 and 2018.

		Operating revenue		Operating expenses		Operating income	
		2019	2018	2019	2018	2019	2018
Domestic	₩	21,133,315	18,024,769	18,537,923	15,327,172	2,595,392	2,697,597
Overseas		2,012,161	1,706,942	1,344,250	1,239,853	667,911	467,089
	₩	23,145,476	19,731,711	19,882,173	16,567,025	3,263,303	3,164,686

ii) The following table provides information of non-current assets by geographical area as of December 31, 2019 and 2018.

		December 31, 2019	December 31, 2018
Domestic	₩	3,459,556	2,713,113
Overseas		297,602	188,821
	₩	3,757,158	2,901,934

Non-current assets as of December 31, 2019 and 2018 include property and equipment, intangible assets and investment properties.

(In millions of won)

6. Cash and due from banks

(a) Cash and due from banks as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Cash	₩	2,528,135	2,568,913
Deposits in Korean won:			
Reserve deposits		13,555,978	2,094,612
Others		38,454	663,371
		13,594,432	2,757,983
Deposits in foreign currencies:			
Deposits		5,607,614	5,030,664
Time deposits		2,214,820	2,585,510
Others		116,674	221,992
		7,939,108	7,838,166
Allowance for impairment		(11,843)	(14,785)
	₩	24,049,832	13,150,277

(b) Restricted due from banks as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Deposits in Korean won:			
Reserve deposits	₩	13,555,978	2,094,612
Others		250	620,308
		13,556,228	2,714,920
Deposits in foreign currencies:			
Deposits		1,138,029	1,150,767
Time deposits		34,329	30,748
Others		8,989	6,494
		1,181,347	1,188,009
	₩	14,737,575	3,902,929

(In millions of won)

7. Securities at fair value through profit or loss

Securities at FVTPL as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Debt securities:			
Government bonds	₩	1,083,634	776,979
Financial institution bonds		3,992,007	2,506,260
Corporate bonds		2,718,286	1,689,256
Bills bought		3,121,398	4,195,776
CMA		3,723,401	3,001,831
Beneficiary certificates		2,701,285	2,347,090
Others		1,151,105	817,039
		18,491,116	15,334,231
Equity securities:			
Stocks		113,316	123,321
Other:			
Gold/silver deposits		111,715	154,881
	₩	18,716,147	15,612,433

(In millions of won)

8. Derivatives

(a) The notional amounts of derivatives as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Foreign currency related			
Over the counter:			
Currency forwards	₩	119,660,724	126,084,358
Currency swaps		38,592,870	31,103,735
Currency options		2,743,171	1,942,878
		160,996,765	159,130,971
Exchange traded:			
Currency futures		34,734	33,543
		161,031,499	159,164,514
Interest rates related			
Over the counter:			
Interest rate swaps		34,119,636	28,827,452
Interest rate options		80,000	-
		34,199,636	28,827,452
Exchange traded:			
Interest rate futures		292,063	294,777
Interest rate swaps (*1)		41,330,340	35,183,073
		41,622,403	35,477,850
		75,822,039	64,305,302
Equity related			
Over the counter:			
Equity options		276,441	344,550
Exchange traded:			
Equity futures		14,926	29,514
Equity options		58,863	52,063
		73,789	81,577
		350,230	426,127
Commodity related			
Over the counter:			
Commodity forwards		175,453	157,416
Hedge			
Fair value hedge:			
Interest rate swaps		9,371,632	9,377,731
Net investment hedge:			
Currency forwards		231,560	223,620
		9,603,192	9,601,351
	₩	246,982,413	233,654,710

(*1) Notional amount of derivatives which is settled in the 'Central Counter Party ("CCP")' system.

(In millions of won)

8. Derivatives (continued)

(b) Fair values of derivative instruments as of December 31, 2019 and 2018 were as follows:

		December 31, 2019		December 31, 2018	
		Assets	Liabilities	Assets	Liabilities
Foreign currency related					
Over the counter:					
Currency forwards	₩	1,231,611	949,731	847,778	778,233
Currency swaps		467,172	516,580	394,428	373,512
Currency options		8,870	9,430	7,651	12,273
		1,707,653	1,475,741	1,249,857	1,164,018
Interest rates related					
Over the counter:					
Interest rate swaps		229,277	202,311	191,343	133,152
Interest rate options		835	-	-	-
		230,112	202,311	191,343	133,152
Equity related					
Over the counter:					
Equity options		2,804	5,504	145	509
		2,804	5,504	145	509
Exchange traded:					
Equity options		-	197	-	953
		2,804	5,701	145	1,462
Commodity related					
Over the counter:					
Commodity forwards		5,089	-	2,026	-
Hedge					
Fair value hedge:					
Interest rate swaps		154,585	210,079	35,093	467,381
Net investment hedge:					
Currency forwards		1,750	-	5,994	5,572
		156,335	210,079	41,087	472,953
	₩	2,101,993	1,893,832	1,484,458	1,771,585

(In millions of won)

8. Derivatives (continued)

(c) Gain or loss on valuation of derivatives for the years ended December 31, 2019 and 2018 were as follows:

		2019		2018	
		Gain	Loss	Gain	Loss
Foreign currency related					
Over the counter:					
Currency forwards	₩	1,111,857	957,739	878,840	808,621
Currency swaps		475,909	499,295	454,604	490,414
Currency options		9,409	5,529	10,999	2,760
		1,597,175	1,462,563	1,344,443	1,301,795
Interest rates related					
Over the counter:					
Interest rate swaps		146,274	161,983	139,748	62,881
Interest rate options		299	-	-	-
		146,573	161,983	139,748	62,881
Exchange traded:					
Interest rate futures		550	-	-	-
		147,123	161,983	139,748	62,881
Equity related					
Over the counter:					
Equity options		3,001	2,919	6,234	4,056
Exchange traded:					
Equity options		313	-	24	152
		3,314	2,919	6,258	4,208
Commodity related					
Over the counter:					
Commodity forwards		5,089	-	2,026	-
Hedge					
Fair value hedge:					
Interest rate swaps		338,168	23,402	142,154	86,909
Net investment hedge:					
Currency forwards		-	1,649	-	2,483
		338,168	25,051	142,154	89,392
	₩	2,090,869	1,652,516	1,634,629	1,458,276

(In millions of won)

8. Derivatives (continued)

(d) Hedge accounting

i) Purpose of risk hedge and strategy

The Group transacts with derivative financial instruments to hedge its interest rate risk and currency risk arising from the assets and liabilities of the Group. The Group applies fair value hedge accounting that uses interest rate swaps to hedge fair value movements risk arising from changes in the market interest rates of the Korean won structured notes, foreign currency issued financial debentures, structured deposits in foreign currencies, foreign currency structured deposits and foreign currency investment receivables. In order to hedge the foreign exchange risk of the net investment from the overseas, the Group applies the net investment hedge accounting for foreign operations using non-derivative financial instruments.

ii) Nominal amounts and average hedge ratios for hedging instruments as of December 31, 2019 and 2018 were as follows:

		December 31, 2019						
		1 year or less	1 year ~ 2 years or less	2 years ~ 3 years or less	3 years ~ 4 years or less	4 years ~ 5 years or less	More than 5 years	Total
Fair value hedges:								
Interest rate swaps	₩	700,469	704,985	667,948	608,424	575,481	6,114,325	9,371,632
Average hedge ratio		100%	100%	100%	100%	100%	100%	100%
Hedge of net investments in foreign operations:								
Currency forwards	₩	231,560	-	-	-	-	-	231,560
Borrowings in foreign currencies		21,269	-	-	-	-	-	21,269
Debt securities issued in foreign currencies		230,773	32,414	554,757	281,345	62,277	-	1,161,566
	₩	483,602	32,414	554,757	281,345	62,277	-	1,414,395
Average hedge ratio		100%	100%	100%	100%	100%	-	100%

		December 31, 2018						
		1 year or less	1 year ~ 2 years or less	2 years ~ 3 years or less	3 years ~ 4 years or less	4 years ~ 5 years or less	More than 5 years	Total
Fair value hedges:								
Interest rate swaps	₩	110,000	687,632	723,177	657,254	715,584	6,484,084	9,377,731
Average hedge ratio		100%	100%	100%	100%	100%	100%	100%
Hedge of net investments in foreign operations:								
Currency forwards	₩	223,620	-	-	-	-	-	223,620
Borrowings in foreign currencies		73,789	20,264	-	-	-	-	94,053
Debt securities issued in foreign currencies		40,933	219,860	31,512	534,588	271,698	-	1,098,591
	₩	338,342	240,124	31,512	534,588	271,698	-	1,416,264
Average hedge ratio		100%	100%	100%	100%	100%	-	100%

(In millions of won)

8. Derivatives (continued)

(e) Impact of hedge accounting on the consolidated financial statements

i) Impact on hedging instruments in the consolidated statement of financial position as of December 31, 2019 and 2018 and consolidated statement of comprehensive income and consolidated statement of changes in equity for the year then ended were as follow:

			December 31, 2019						
			Consolidated statement of financial position			Consolidated statement of comprehensive income			
	Hedging instruments		Securities at FVOCI	Deposits	Debt securities issued	Other comprehensive income for the year	Accumulated fair value hedges adjustment	Changes in fair value for the year	Reserve of exchange differences on translation
Fair value hedges:									
Interest rate risk	Debt securities issued	₩	-	-	7,072,596	-	46,201	(250,446)	-
	Investment bonds		432,172	-	-	-	6,745	1,399	-
	Time deposits		-	1,786,425	-	-	(102,493)	(59,416)	-
Hedge of net investments in foreign operations:									
Foreign exchange risk	Net investments in foreign operations		-	-	-	49,463	-	49,463	(88,953)
		₩	432,172	1,786,425	7,072,596	49,463	(49,547)	(259,000)	(88,953)

			December 31, 2018						
			Consolidated statement of financial position			Consolidated statement of comprehensive income			
	Hedging instruments		Securities at FVOCI	Deposits	Debt securities issued	Other comprehensive income for the year	Accumulated fair value hedges adjustment	Changes in fair value for the year	Reserve of exchange differences on translation
Fair value hedges:									
Interest rate risk	Debt securities issued	₩	-	-	7,058,950	-	(357,232)	(47,772)	-
	Investment bonds		293,215	-	-	-	(2,832)	800	-
	Time deposits		-	1,814,109	-	-	(167,226)	(9,490)	-
Hedge of net investments in foreign operations:									
Foreign exchange risk	Net investments in foreign operations		-	-	-	35,879	-	(35,879)	138,416
		₩	293,215	1,814,109	7,058,950	35,879	(527,290)	(92,341)	138,416

(In millions of won)

8. Derivatives (continued)

(e) Impact of hedge accounting on the consolidated financial statements (continued)

ii) Impact on hedged items in the consolidated statement of financial position as of December 31, 2019 and 2018 and consolidated statement of comprehensive income and consolidated statement of changes in equity for the year then ended were as follow:

			December 31, 2019						
				Consolidated statement of financial position				Consolidated statement of comprehensive income	
			Notional amounts	Derivative assets	Derivative liabilities	Borrowings	Debt securities issued	Other comprehensive loss for the period	Changes in fair value for the period
Fair value hedges:									
Interest rate risk	Interest rate swaps	₩	9,371,632	154,585	210,079	-	-	-	314,766
Hedge of net investments in foreign operations:									
Foreign exchange risk	Currency forwards		231,560	1,751	-	-	-	(1,709)	(4,036)
	Borrowings in foreign currencies		21,269	-	-	21,269	-	(5,725)	(5,725)
	Debt securities issued in foreign currencies		1,161,566	-	-	-	1,156,628	(42,029)	(42,029)
		₩	10,786,027	156,336	210,079	21,269	1,156,628	(49,463)	262,976

			December 31, 2018						
				Consolidated statement of financial position				Consolidated statement of comprehensive income	
			Notional amounts	Derivative assets	Derivative liabilities	Borrowings	Debt securities issued	Other comprehensive loss for the period	Changes in fair value for the period
Fair value hedges:									
Interest rate risk	Interest rate swaps	₩	9,377,731	35,093	467,381	-	-	-	55,245
Hedge of net investments in foreign operations:									
Foreign exchange risk	Currency forwards		223,620	5,994	5,572	-	-	505	(3,260)
	Borrowings in foreign currencies		94,053	-	-	94,053	-	(7,401)	(7,401)
	Debt securities issued in foreign currencies		1,098,591	-	-	-	1,092,739	(28,983)	(28,983)
		₩	10,793,995	41,087	472,953	94,053	1,092,739	(35,879)	15,601

(In millions of won)

8. Derivatives (continued)

(e) Impact of hedge accounting on the consolidated financial statements (continued)

iii) Gains (losses) on fair value hedged items and hedging instruments attributable to the hedged risk for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019		
		Losses on fair value hedges (hedged items)	Gains on fair value hedges (hedging instruments)	Hedge ineffectiveness recognized in profit or loss (*1)
Fair value hedges:				
Interest rate swaps	₩	(370,787)	377,121	6,334
Hedge of net investments in foreign operations:				
Foreign exchange risk		49,463	(51,790)	(2,327)
	₩	(321,324)	325,331	4,007

(*1) Recognized hedge ineffectiveness is included in other operating income and expenses in the consolidated statement of comprehensive income.

		December 31, 2018		
		Losses on fair value hedges (hedged items)	Gains on fair value hedges (hedging instruments)	Hedge ineffectiveness recognized in profit or loss (*1)
Fair value hedges:				
Interest rate swaps	₩	(76,573)	79,635	3,062
Hedge of net investments in foreign operations:				
Foreign exchange risk		35,879	(39,644)	(3,765)
	₩	(40,694)	39,991	(703)

(*1) Recognized hedge ineffectiveness is included in other operating income and expenses in the consolidated statement of comprehensive income.

(In millions of won)

9. Loans

(a) Details of loans as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	
		Loans at amortized cost	Loans at FVTPL
Household loans	₩	123,219,603	-
Corporate loans		139,966,542	868,991
Public and other loans		3,189,534	-
Loans to banks		2,672,514	-
Credit card receivables		153,436	-
		269,201,629	868,991
Deferred loan origination costs and fees		497,804	-
		269,699,433	868,991
Less: Allowance for impairment		(1,527,169)	-
	₩	268,172,264	868,991

		December 31, 2018	
		Loans at amortized cost	Loans at FVTPL
Household loans	₩	112,594,439	-
Corporate loans		133,399,567	645,237
Public and other loans		2,729,075	-
Loans to banks		3,586,594	-
Credit card receivables		103,580	-
		252,413,255	645,237
Deferred loan origination costs and fees		496,263	-
		252,909,518	645,237
Less: Allowance for impairment		(1,675,712)	-
	₩	251,233,806	645,237

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9. **Loans (continued)**

(b) Changes in allowance for impairment and book value

i) Changes in allowance for impairment for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019															
					Loans												
		Due from banks			Household			Corporate			Others			Other assets			
		Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Total
Beginning balance	₩	14,445	340	-	94,194	79,954	131,141	371,157	523,180	444,837	14,162	6,348	10,739	22,656	2,175	781	1,716,109
Transfer to 12 month expected credit losses		241	(241)	-	16,830	(16,499)	(331)	44,905	(43,205)	(1,700)	805	(802)	(3)	160	(158)	(2)	-
Transfer to lifetime expected credit losses		(19)	19	-	(8,516)	16,266	(7,750)	(32,494)	114,871	(82,377)	(202)	332	(130)	(98)	103	(5)	-
Transfer to credit-impaired financial assets		-	-	-	(137)	(2,740)	2,877	(399)	(6,814)	7,213	(71)	(19)	90	(2)	(94)	96	-
Provision for (reversal of) allowance		(3,941)	478	-	(12,373)	(2,236)	186,704	(41,486)	(28,830)	273,232	(6,003)	2,174	259	1,517	(370)	409	369,525
Write-offs		-	-	-	-	-	(226,348)	-	-	(226,161)	-	-	(8,718)	-	-	(133)	(461,360)
Effect of discounting		-	-	-	-	-	-	-	-	(17,560)	-	-	-	-	-	-	(17,560)
Allowance related to loans transferred		-	-	-	-	(241)	(16,070)	-	(245)	(30,429)	-	-	(820)	-	-	-	(47,805)
Recoveries		-	-	-	-	-	58,620	-	-	43,357	-	-	1,876	-	-	515	104,368
Others (*1)		515	6	-	639	111	318	4,237	(83,849)	(19,336)	438	176	30	(9,871)	-	-	(106,586)
Ending balance	₩	11,241	602	-	90,637	74,615	129,161	345,920	475,108	391,076	9,120	8,209	3,323	14,362	1,656	1,661	1,556,691

(*1) Other changes were due to debt restructuring, debt-equity swap and foreign exchange rate.

(In millions of won)

9. Loans (continued)

(b) Changes in allowance for impairment and book value (continued)

i) Changes in allowance for impairment for the years ended December 31, 2019 and 2018 were as follows: (continued)

		December 31, 2018															
					Loans												
		Due from banks			Household			Corporate			Others			Other assets			
		Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Total
Beginning balance	₩	14,026	1,023	-	71,220	119,469	138,537	420,080	555,531	544,904	13,042	3,108	3,925	22,325	2,298	2,300	1,911,788
Transfer to 12 month expected credit losses		261	(261)	-	44,654	(44,285)	(369)	47,190	(47,040)	(150)	438	(438)	-	258	(257)	(1)	-
Transfer to lifetime expected credit losses		(5)	5	-	(5,374)	10,910	(5,536)	(39,016)	75,175	(36,159)	(249)	252	(3)	(114)	124	(10)	-
Transfer to credit- impaired financial assets		-	-	-	(168)	(2,618)	2,786	(595)	(11,234)	11,829	(53)	(141)	194	(3)	(66)	69	-
Provision for (reversal of) allowance		(99)	(447)	-	(16,698)	(3,589)	157,882	(59,946)	(56,123)	208,896	894	3,553	10,790	(2,160)	83	677	243,713
Write-offs		-	-	-	-	-	(207,453)	-	-	(274,444)	-	-	(2,567)	-	-	(65)	(484,529)
Effect of discounting		-	-	-	-	-	-	-	-	(15,086)	-	-	-	-	-	-	(15,086)
Allowance related to loans transferred		-	-	-	-	(17)	(4,159)	-	(357)	(52,094)	-	-	(2,454)	-	(7)	(2,736)	(61,824)
Recoveries		-	-	-	-	-	49,222	-	-	62,337	-	-	847	-	-	547	112,953
Others (*1)		262	20	-	560	84	231	3,444	7,228	(5,196)	90	14	7	2,350	-	-	9,094
Ending balance	₩	14,445	340	-	94,194	79,954	131,141	371,157	523,180	444,837	14,162	6,348	10,739	22,656	2,175	781	1,716,109

(*1) Other changes were due to debt restructuring, debt-equity swap and foreign exchange rate.

(In millions of won)

9. Loans (continued)

(b) Changes in allowance for impairment and book value (continued)

ii) Changes in book value of due from banks, loans and other assets for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019															
					Loans												
		Due from banks			Household			Corporate			Others			Other assets			
		Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Total
Beginning balance	₩	10,592,333	3,816	-	105,672,489	6,625,354	296,597	111,937,650	20,662,405	799,513	5,796,137	606,449	16,661	14,169,589	54,975	1,847	277,235,815
Transfer to 12 month expected credit losses		1,016	(1,016)	-	2,560,765	(2,556,951)	(3,814)	3,893,993	(3,889,945)	(4,048)	37,520	(37,516)	(4)	11,068	(11,061)	(7)	-
Transfer to lifetime expected credit losses		(204,668)	204,668	-	(5,252,557)	5,271,857	(19,300)	(15,705,942)	15,818,112	(112,170)	(212,057)	212,229	(172)	(41,560)	41,581	(21)	-
Transfer to credit-impaired financial assets		-	-	-	(581,119)	(32,739)	613,858	(1,062,808)	(49,122)	1,111,930	(41,110)	(39)	41,149	(2,590)	(496)	3,086	-
Origination		33,659,684	-	-	38,795,298	-	-	67,277,060	-	-	5,618,369	-	-	8,228,699	-	-	153,579,110
Recoveries		(22,790,213)	(203,040)	-	(26,216,222)	(1,662,438)	(217,490)	(50,921,800)	(9,544,705)	(359,777)	(5,975,266)	(150,563)	(12,952)	(8,890,494)	(26,978)	(234)	(126,972,172)
Write-offs		-	-	-	-	-	(226,348)	-	-	(226,161)	-	-	(8,718)	-	-	(133)	(461,360)
Allowance related to loans transferred		-	-	-	-	(5,122)	(101,765)	-	(3,806)	(283,726)	-	-	(18,398)	-	(3)	(1,061)	(413,881)
Others (*1)		270,920	40	-	258,050	434	766	724,418	(45,196)	(49,333)	142,759	968	38	-	-	-	1,303,864
Ending balance	₩	21,529,072	4,468	-	115,236,704	7,640,395	342,504	116,142,571	22,947,743	876,228	5,366,352	631,528	17,604	13,474,712	58,018	3,477	304,271,376

(*1) Other changes were due to debt restructuring, debt-equity swap and foreign exchange rate.

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9. **Loans (continued)**

(b) Changes in allowance for impairment and book value (continued)

ii) Changes in book value of due from banks, loans and other assets for the years ended December 31, 2019 and 2018 were as follows: (continued)

		December 31, 2018														
					Loans											
		Due from banks			Household			Corporate			Others			Other assets		
		Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Total
Beginning balance	₩	16,562,220	364,251	-	96,289,682	7,168,246	266,402	104,824,273	17,479,091	926,327	4,752,669	487,039	13,094	9,048,043	54,931	4,181	258,240,449
Transfer to 12 month expected credit losses		13,815	(13,815)	-	3,344,109	(3,340,492)	(3,617)	3,478,038	(3,477,544)	(494)	71,331	(71,331)	-	14,068	(14,066)	(2)	-
Transfer to lifetime expected credit losses		(3,777)	3,777	-	(4,825,295)	4,840,362	(15,067)	(14,534,008)	14,582,658	(48,650)	(367,927)	367,931	(4)	(50,666)	50,677	(11)	-
Transfer to credit-impaired financial assets		-	-	-	(504,905)	(28,097)	533,002	(1,327,660)	(34,445)	1,362,105	(25,023)	(8,558)	33,581	(14,206)	(248)	14,454	-
Origination		5,499,513	-	-	35,343,577	-	-	67,962,815	-	-	5,300,176	-	-	10,762,919	-	-	124,869,000
Recoveries		(11,627,567)	(348,973)	-	(24,189,594)	(2,011,870)	(202,453)	(48,964,496)	(7,991,089)	(650,015)	(4,030,497)	(170,856)	(12,898)	(5,590,569)	(35,824)	(3,628)	(105,830,329)
Write-offs		-	-	-	-	-	(207,453)	-	-	(274,444)	-	-	(2,567)	-	-	(65)	(484,529)
Allowance related to loans transferred		-	-	-	-	(3,059)	(74,664)	-	(15,997)	(491,107)	-	-	(14,554)	-	(495)	(13,082)	(612,958)
Others (*1)		148,129	(1,424)	-	214,915	264	447	498,688	119,731	(24,209)	95,408	2,224	9	-	-	-	1,054,182
Ending balance	₩	10,592,333	3,816	-	105,672,489	6,625,354	296,597	111,937,650	20,662,405	799,513	5,796,137	606,449	16,661	14,169,589	54,975	1,847	277,235,815

(*1) Other changes were due to debt restructuring, debt-equity swap and foreign exchange rate.

(In millions of won)

9. Loans (continued)

(c) Changes in deferred loan origination costs for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Beginning balance	₩	496,263	426,523
Loan origination		242,257	269,788
Amortization		(240,716)	(200,048)
Ending balance	₩	497,804	496,263

10. Securities at fair value through other comprehensive income and Securities at amortized cost

(a) Details of securities at FVOCI and securities at amortized cost as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Securities at FVOCI:			
Debt securities:			
Government bonds	₩	10,481,889	7,712,975
Financial institutions bonds		18,267,439	15,404,298
Corporate bonds		11,311,406	8,318,273
		40,060,734	31,435,546
Equity securities:			
Stocks		520,230	438,570
Equity investments		3,983	4,232
Others		70,958	-
		595,171	442,802
	₩	40,655,905	31,878,348
Securities at amortized cost:			
Debt securities:			
Government bonds	₩	12,570,196	11,695,562
Financial institutions bonds		3,378,630	929,756
Corporate bonds		4,141,357	4,129,043
Others		167,016	74,803
		20,257,199	16,829,164
Allowance for impairment		(5,311)	(4,764)
	₩	20,251,888	16,824,400

(In millions of won)

10. Securities at fair value through other comprehensive income and Securities at amortized cost (continued)

(a) Details of securities at FVOCI and securities at amortized cost as of December 31, 2019 and details of available-for-sale financial assets and held-to-maturity financial assets as of December 31, 2018 were as follows: (continued)

Details of equity instruments designated at FVOCI as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Marketable securities	₩	183,445	136,170
Non-marketable securities		336,785	302,400
Others		74,941	4,232
	₩	595,171	442,802

The Group designated the above equity instruments at FVOCI, in accordance with the Group's policy.

Cumulative net losses reclassified in equity upon disposition of equity securities for the years ended December 31, 2019 and 2018 were (-)₩10,563 million and (-)₩4,399 million, respectively and cumulated net gains replaced by the reclassification of the account for the year ended December 31, 2019 were ₩2,759 million.

(b) Gains and losses on sale of securities at FVOCI for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Gain on sale of securities at FVOCI	₩	110,793	18,049
Loss on sale of securities at FVOCI		(3,160)	(1,662)
	₩	107,633	16,387

The Group disposed equity instruments that are measured at FVOCI for debt-equity swap. At the time of disposal, fair value of equity instruments for the years ended December 31, 2019 and 2018 were ₩39,273 million and ₩2,379 million, respectively and cumulative net losses were (-)₩10,563 million and (-)₩4,399 million, respectively.

(c) There were no disposal of securities at amortized cost for the years ended December 31, 2019 and 2018.

(In millions of won)

10. Securities at fair value through other comprehensive income and Securities at amortized cost (continued)

(d) Changes in allowance for credit loss of securities at FVOCI and securities at amortized cost

i) Changes in allowance for credit loss of securities at FVOCI and securities at amortized cost for the years ended December 31, 2019 and 2018 were as follows:

	December 31, 2019							
	Securities at FVOCI				Securities at amortized cost			
	12-month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total	12-month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total
Beginning balance	₩ 20,202	362	-	20,564	4,746	18	-	4,764
Transfer to 12-month expected credit losses	33	(33)	-	-	4,301	(4,301)	-	-
Transfer to lifetime expected credit losses	(60)	60	-	-	-		-	-
Transfer to impaired financial assets	-	-	-	-	-		-	-
Provision (reversal)	6,729	(2,616)	-	4,113	(3,717)	4,295	-	578
Disposals	(5,256)	(258)	-	(5,514)	-	-	-	-
Others (*1)	(1,177)	3,140	-	1,963	(31)	-	-	(31)
Ending balance	₩ 20,471	655	-	21,126	5,299	12	-	5,311

(*1) Other changes were due to foreign exchange rate changes, etc.

	December 31, 2018							
	Securities at FVOCI				Securities at amortized cost			
	12-month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total	12-month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total
Beginning balance	₩ 15,161	1,938	-	17,099	5,353	2,232	-	7,585
Transfer to 12-month expected credit losses	-	-	-	-	-	-	-	-
Transfer to lifetime expected credit losses	(234)	234	-	-	-	-	-	-
Transfer to impaired financial assets	-	-	-	-	-	-	-	-
Provision (reversal)	11,615	(3,220)	-	8,395	1,093	(2,214)	-	(1,121)
Disposals	(5,223)	(229)	-	(5,452)	-	-	-	-
Others (*1)	(1,117)	1,639	-	522	(1,700)	-	-	(1,700)
Ending balance	₩ 20,202	362	-	20,564	4,746	18	-	4,764

(*1) Other changes were due to foreign exchange rate changes, etc.

(In millions of won)

10. Securities at fair value through other comprehensive income and Securities at amortized cost (continued)

(ii) Changes in book value of securities at FVOCI and securities at amortized cost for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019							
		Securities at FVOCI				Securities at amortized cost			
		12-month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total	12-month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total
Beginning balance	₩	31,329,716	105,830	-	31,435,546	16,806,690	22,474	-	16,829,164
Transfer to 12-month expected credit losses		34,555	(34,555)	-	-	20,198	(20,198)	-	-
Transfer to lifetime expected credit losses		(64,928)	64,928	-	-	-	-	-	-
Transfer to impaired financial asset		-	-	-	-	-	-	-	-
Acquisitions		38,854,287	61,410	-	38,915,697	9,692,417	-	-	9,692,417
Disposals		(11,089,848)	(10,222)	-	(11,100,070)	-	-	-	-
Redemption		(19,184,084)	-	-	(19,184,084)	(6,394,739)	-	-	(6,394,739)
Others (*1)		(58,058)	51,703	-	(6,355)	109,359	20,998	-	130,357
Ending balance	₩	39,821,640	239,094	-	40,060,734	20,233,925	23,274	-	20,257,199

(*1) Other changes were due to foreign exchange rate changes, etc.

		December 31, 2018							
		Securities at FVOCI				Securities at amortized cost			
		12-month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total	12-month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total
Beginning balance	₩	29,931,489	15,878	-	29,947,367	14,801,454	21,444	-	14,822,898
Transfer to 12-month expected credit losses		-	-	-	-	-	-	-	-
Transfer to lifetime expected credit losses		(26,187)	26,187	-	-	-	-	-	-
Transfer to impaired financial asset		-	-	-	-	-	-	-	-
Acquisitions		23,600,909	98,778	-	23,699,687	3,751,191	-	-	3,751,191
Disposals		(4,881,887)	(18,687)	-	(4,900,574)	-	-	-	-
Redemption		(18,199,108)	-	-	(18,199,108)	(1,846,929)	(3)	-	(1,846,932)
Others (*1)		904,500	(16,326)	-	888,174	100,974	1,033	-	102,007
Ending balance	₩	31,329,716	105,830	-	31,435,546	16,806,690	22,474	-	16,829,164

(*1) Other changes were due to foreign exchange rate changes, etc.

(In millions of won)

11. Property and equipment

(a) Details of property and equipment as of December 31, 2019 and 2018 were as follows:

		December 31, 2019		
		Acquisition cost	Accumulated depreciation	Book value
Land	₩	1,247,774	-	1,247,774
Buildings (*1)		864,864	(329,734)	535,130
Right-of-use assets		658,330	(182,024)	476,306
Others		1,359,287	(1,153,208)	206,079
	₩	4,130,255	(1,664,966)	2,465,289

(*1) ₩572 million of government subsidy was deducted from book value.

		December 31, 2018		
		Acquisition cost	Accumulated depreciation	Book value
Land	₩	1,251,039	-	1,251,039
Buildings (*1)		852,029	(279,649)	572,380
Others		1,337,159	(1,146,166)	190,993
	₩	3,440,227	(1,425,815)	2,014,412

(*1) ₩494 million of government subsidy was deducted from book value.

(b) Changes in property and equipment for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019				
		Land	Buildings	Right-of-use assets	Others	Total
Beginning balance (*1)	₩	1,251,039	572,380	502,364	184,184	2,509,967
Acquisitions (*2)(*3)		69,046	14,347	209,864	108,597	401,854
Disposals and write-offs (*4)		(32)	(769)	(2,934)	(19,451)	(23,186)
Depreciation		-	(49,490)	(235,785)	(74,294)	(359,569)
Amounts transferred to investment properties		(72,173)	(2,693)	-	-	(74,866)
Amounts transferred to non-current assets held for sale		(410)	(45)	-	-	(455)
Effects of foreign currency movements		304	1,400	2,797	7,043	11,544
Ending balance	₩	1,247,774	535,130	476,306	206,079	2,465,289

(*1) The beginning balance was restated in accordance with K-IFRS No.1116.
(*2) ₩76,004 million transferred from construction-in progress was included.
(*3) ₩2,280 million of provision for the asset retirement related to newly acquired assets was included.
(*4) ₩9,001 million of write-off was included.

(In millions of won)

11. Property and equipment (continued)

(b) Changes in property and equipment for the years ended December 31, 2019 and 2018 were as follows: (continued)

		December 31, 2018			
		Land	Buildings	Others	Total
Beginning balance	₩	1,260,239	605,303	190,333	2,055,875
Acquisitions (*1)(*2)(*3)		-	11,558	82,757	94,315
Disposals and write-offs (*4)		(17,262)	(1,742)	(8,188)	(27,192)
Depreciation		-	(41,228)	(77,339)	(118,567)
Amounts transferred from (to) investment properties		6,529	(2,314)	-	4,215
Amounts transferred to non-current assets held for sale		(33)	(46)	-	(79)
Effects of foreign currency movements		1,566	849	3,430	5,845
Ending balance	₩	1,251,039	572,380	190,993	2,014,412

(*1) ₩6,319 million transferred from construction-in progress was included.
(*2) ₩1,810 million of provision for the asset retirement related to newly acquired assets was included.
(*3) ₩897 million among acquisition cost of others was accounted for as accounts payable.
(*4) ₩1,521 million of write-off was included.

(c) Insured assets and liability insurances as of December 31, 2019 were as follows:

Type of insurance	Insured assets		Amount covered	Insurance company
Comprehensive insurance for financial institutions	Cash & securities	₩	20,000	Samsung Fire & Marine Insurance Co., Ltd. and 4 other insurance companies
Property insurance	Real estate & movable properties for business purpose		833,394	Samsung Fire & Marine Insurance Co., Ltd., etc. and 4 other insurance companies
Burglary insurance	Cash & securities		60,000	Samsung Fire & Marine Insurance Co., Ltd., etc and 3 other insurance companies
Compensation liability insurance for officers	-		50,000	Meritz Fire & Marine Insurance Co., Ltd., etc. and 6 other insurance companies
Compensation liability insurance for gas accident	Real estate		500	Meritz Fire & Marine Insurance Co., Ltd.
Compensation liability insurance for personal information protection	-		10,000	Hyundai Marine & Fire Insurance Co., Ltd.
Compensation liability insurance for electronic financial transaction	-		2,000	Lotte Insurance Co., Ltd., etc.
Compensation liability insurance for casualty	Real estate		1,000	Samsung Fire & Marine Insurance Co., Ltd.
Compaensation liability insurance for elevator accidents	-		80	Samsung Fire & Marine Insurance Co., Ltd.
		₩	976,974	

Besides the insurances listed above, the Group also has automobile liability insurance, medical insurance for employees, and casualty insurance for protecting property and employees.

(In millions of won)

12. Leases

(a) The details of the right-of-use assets by the lessee's underlying asset type as of December 31, 2019 were as follows:

		December 31, 2019		
		Acquisition cost	Accumulated depreciation	Book value
Real estate	₩	611,619	(166,487)	445,132
Vehicle		27,628	(8,557)	19,071
Others		19,083	(6,980)	12,103
	₩	658,330	(182,024)	476,306

(b) The details of the changes in the right-of-use assets for the year ended December 31, 2019 were as follows:

		December 31, 2019			
		Real estate	Vehicle	Others	Total
Beginning balance	₩	472,397	17,810	12,157	502,364
Acquisitions		191,195	11,645	7,024	209,864
Disposals		(2,530)	(309)	(95)	(2,934)
Depreciation		(218,637)	(10,165)	(6,983)	(235,785)
Effects of foreign currency movements		2,707	90	-	2,797
Ending balance	₩	445,132	19,071	12,103	476,306

(c) The details of the maturity of the lease liabilities as of December 31, 2019 were as follows:

		December 31, 2019						
		1 month or less	1 month ~ 3 months or less	3 months ~ 6 months or less	6 months ~ 1 year or less	1 year ~ 5 years or less	More than 5 years	Total
Real estate	₩	18,024	29,523	40,264	71,705	252,168	15,238	426,922
Vehicle		2,160	1,622	2,337	4,460	10,625	-	21,204
Others		924	925	1,183	1,986	7,794	-	12,812
	₩	21,108	32,070	43,784	78,151	270,587	15,238	460,938

The abovementioned amounts have been classified as the earliest due dates on which the Group's payment obligation arises based on undiscounted cash flows.

(d) For the year ended December 31, 2019, lease payment for leases of low value items was amounted to ₩3,201 million and there has been no short term lease.

(In millions of won)

13. Intangible assets

(a) Changes in intangible assets for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019					
		Goodwill	Software	Development cost	Memberships	Others	Total
Beginning balance	₩	73,374	63,264	46,499	48,597	84,495	316,229
Acquisitions (*1)		-	37,797	19,381	93	650,824	708,095
Disposals		-	(1,042)	(3,695)	(413)	(26)	(5,176)
Impairment (*2)		-	-	-	-	(151,523)	(151,523)
Amortization (*3)		-	(21,599)	(18,222)	-	(173,206)	(213,027)
Effects of foreign currency movements		-	848	-	40	863	1,751
Ending balance (*4)	₩	73,374	79,268	43,963	48,317	411,427	656,349

(*1) Included intangible assets related to the rights to be the depository bank of municipal and provincial governments.
(*2) The Group reviewed the recoverable value of intangible assets related to the rights to be the depository bank of municipal and provincial governments due to the performance below forecast and future prospects. As a result of the review, the Group recognized impairment loss amounted to ₩151,523 million for the year ended December 31, 2019. The impairment loss was included in the financial performance of the retail banking segment, and included in the non-operating expenses in the consolidated statement of comprehensive income.
(*3) ₩168,736 million among amortization cost of other intangible assets was included in net other operating expenses.
(*4) ₩436,376 million among other intangible assets was accounted for as accounts payable.

		December 31, 2018					
		Goodwill	Software	Development cost	Memberships	Others	Total
Beginning balance	₩	73,374	49,117	43,416	46,916	86,756	299,579
Acquisitions (*1)		-	36,867	18,020	4,286	35,157	94,330
Disposals		-	-	-	(2,619)	-	(2,619)
Amortization (*2)		-	(26,401)	(14,937)	-	(36,122)	(77,460)
Effects of foreign currency movements		-	3,681	-	14	(1,296)	2,399
Ending balance	₩	73,374	63,264	46,499	48,597	84,495	316,229

(*1) ₩12,337 million among acquisition cost of other intangible assets was accounted for as accounts payable.
(*2) ₩33,573 million among amortization cost of other intangible assets was included in other operating expenses.

(In millions of won)

13. Intangible assets (continued)

(b) Goodwill

i) The carrying amounts of goodwill allocated to each Cash-Generating Unit ("CGU") as of December 31, 2019 and 2018 were as follows:

CGU		December 31, 2019	December 31, 2018
PT Bank Shinhan Indonesia	₩	45,175	45,175
Shinhan Bank Vietnam Co., Ltd.		28,199	28,199
	₩	73,374	73,374

ii) Impairment test

The recoverable amounts of CGUs are determined on the basis of value-in-use calculations using discounted cash flow (DCF) model.

Impairment test results on goodwill of PT Bank Shinhan Indonesia and Shinhan Bank Vietnam Co., Ltd were as follows:

ⓐ Measurement date and projection period

The recoverable amounts are measured as of June 30, 2019. The projection period used in value-in-use calculations is 5.5 years (July 2019 through December 2024) considering synergy effect of business combinations and the value-in-use after projection period is estimated on the assumption that the future cash flows will increase by perpetual growth rate for every year.

ⓑ Significant assumptions

The expected future cash flows from the cash-generating unit are based on the CPI growth rate, market size and the market share of the Group. Major unobservable assumptions applied during the forecast period are as follows:

(Unit: %)

Cash-generating units	Net interest income growth rate	Net commission income growth rate	General administrative expenses growth rate	Net income growth rate
PT Bank Shinhan Indonesia	19.15	15.31	10.71	28.23
Shinhan Bank Vietnam Co., Ltd.	3.12	6.57	3.79	1.41

(In millions of won)

13. Intangible assets (continued)

(b) Goodwill (continued)

ⓑ Significant assumptions (continued)

The cost of equity capital is calculated by taking into account the systematic risk of the company in the market risk premium paid in return for risk free rate. Terminal growth rate was estimated based on inflation and did not exceed the projected long-term average growth rate of the relevant industry report.

(Unit: %)

Cash-generating units	Discount rate	Terminal growth rate
PT Bank Shinhan Indonesia	12.30	3.00
Shinhan Bank Vietnam Co., Ltd.	13.90	3.00

ⓒ Significant assumptions

The carrying amounts and recoverable amounts of the CGUs to which goodwill has been allocated as of valuation date were as follows:

		PT Bank Shinhan Indonesia	Shinhan Bank Vietnam Co., Ltd.
Recoverable amount	₩	458,761	804,543
Carrying amount		435,369	708,733
Recoverable amount in excess of carrying amount	₩	23,392	95,810

As a result of the impairment test of goodwill, the recoverable amounts of the CGUs to which goodwill is allocated exceeded the carrying amounts, therefore no impairment is recognized.

(In millions of won)

14. Investments in associates

(a) Investments in associates as of December 31, 2019 and 2018 were as follows:

Investees	Location	Reporting date	Ownership (%) December 31, 2019	Ownership (%) December 31, 2018
BNP Paribas Cardif Life Insurance Co., Ltd. (*1)(*2)	Korea	September 30	14.99	14.99
KOREA FINANCE SECURITY (*1)(*7)	Korea	September 30	14.91	-
Daewontos Co., Ltd. (*5)	Korea	-	-	36.33
DAEGY Electrical Construction Co., Ltd. (*3)(*4)	Korea	September 30	27.45	27.45
YEONWOONG SYSTEM (*5)	Korea	-	-	21.77
DOODOO LOGITECH (*1)(*3)	Korea	September 30	27.96	27.96
Neoplux Technology Valuation Investment Fund (*1)	Korea	September 30	33.33	33.33
Partners 4th Growth Investment Fund (*1)	Korea	September 30	25.00	25.00
KTB Newlake Global Healthcare PEF (*1)	Korea	September 30	20.00	20.00
JAEYOUNG SOLUTEC Co., Ltd. (*5)	Korea	-	-	25.90
Tigris-Aurum Fund 1 (*5)	Korea	-	-	27.27
DAEKWANG SEMICON DUCTOR Co., Ltd. (*1)(*3)	Korea	September 30	20.94	20.94
Songrim Co., Ltd. (*3)(*4)	Korea	December 31	35.34	35.34
Taihan Industrial System Co., Ltd. (*6)	Korea	-	-	28.29
Multimedia Tech Co., Ltd. (*3)	Korea	December 31	21.06	-
Hyungje art printing (*3)(*4)	Korea	December 31	31.54	31.54
MIEL Co., Ltd. (*3)	Korea	December 31	28.77	-
WON JIN HOME PLAN Co., Ltd. (*3)(*4)	Korea	December 31	31.69	-
IL GU FARM Co., Ltd. (*3)(*4)	Korea	December 31	28.47	-
Korea Credit Bureau (*1)(*7)	Korea	September 30	4.50	-
Goduck Gangil1 PFV Co., Ltd. (*7)(*8)	Korea	December 31	1.04	-
SBC PFV Co., Ltd. (*7)(*8)(*9)	Korea	December 31	12.50	-
GMG Development Co., Ltd. (*7)(*8)(*10)	Korea	December 31	5.00	-
ICSF (The Korea's Information Center for Savings & Finance) (*4)	Korea	December 31	32.26	32.26
Shinhan-Albatross Technology Investment Fund	Korea	December 31	33.33	33.33
Miraeequity-Incus Venture Business Fund No.4	Korea	December 31	23.53	23.53
Shinhan-Neoplux Energy Newbiz Fund (*1)	Korea	September 30	23.33	23.33
Stassets-DA Value Healthcare Fund I (*1)	Korea	September 30	24.10	24.10

(*1) Financial statements as of September 30, 2019 were used for the equity method accounting since the financial statements as of December 31, 2019 were not available. Significant trades and events occurred within the period were properly reflected.

(*2) The Group used equity method accounting as the Group has significant influence over the investee through significant operating transactions.

(*3) The shares of the investees were acquired by debt-equity swap. The Group reclassified financial assets at FVOCI to investments in associates as the reorganization procedures were completed and now the Group can normally exercise its voting rights to the investees.

(*4) The latest financial statements available were used for the equity method accounting since the financial statements as of December 31, 2019 were not available. Significant trades and events occurred within the period were properly reflected.

(*5) These investees were sold and excluded from the associates during the year ended December 31, 2019.

(*6) As it does not have significant influence, it was excluded from associates during the year ended December 31, 2019.

(*7) Although it holds less than 20% of shares, the equity method is applied for evaluation since the Group has significant influence on the investee, such as participation in their decision making.

(*8) The Group newly acquired these associates during the year ended December 31, 2019.

(*9) Voting right was 4.65%.

(*10) Voting right was 14.91%.

(In millions of won)

14. Investments in associates (continued)

(b) Changes in investments in associates for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019							
Associates		Acqui-sition cost	Beginning balance	Acqui-sition (redemp-tion)	Gain from disposal	Share of profit (loss) of associates	Share of other comprehe-nsive income (loss) of associates	Dividends received	Ending balance
BNP Paribas Cardif Life Insurance Co., Ltd.	₩	42,204	49,841	-	-	(526)	3,660	(375)	52,600
KOREA FINANCE SECURITY (*1)		3,448	-	3,448	-	(213)	-	-	3,235
Daewontos Co., Ltd. (*2)		-	-	-	-	-	-	-	-
DAEGY Electrical Construction Co., Ltd.		-	109	-	-	-	-	-	109
YEONWOONG SYSTEM		-	76	(76)	-	-	-	-	-
DOODOO LOGITECH		-	44	-	-	(37)	-	-	7
Neoplux Technology Valuation Investment Fund		17,406	18,738	(1,662)	-	(692)	-	-	16,384
Partners 4th Growth Investment Fund		16,697	16,612	(1,219)	-	(476)	-	-	14,917
KTB Newlake Global Healthcare PEF		8,036	6,590	1,000	-	(69)	-	-	7,521
Jaeyang Industry		-	-	-	-	-	-	-	-
Tigris-Aurum Fund 1		1,500	1,391	(1,500)	425	-	-	(316)	-
DAEKWANG SEMICON DUCTOR Co., Ltd.		-	3,334	-	-	51	2	-	3,387
Songrim Co., Ltd. (*2)		-	-	-	-	-	-	-	-
Taihan Industrial System Co., Ltd. (*2)		-	-	-	-	-	-	-	-
Multimedia Tech Co., Ltd.		-	-	-	-	19	-	-	19
Hyungje Art Printing (*2)		-	-	-	-	-	-	-	-
MIEL Co., Ltd. (*3)		-	-	-	-	-	-	-	-
WON JIN HOME PLAN Co., Ltd.		-	-	-	-	183	-	-	183
IL GU FARM Co., Ltd.		-	-	-	-	-	-	-	-
Korea Credit Bureau (*1)		2,250	-	2,250	-	1,156	-	-	3,406
Goduck Gangil1 PFV Co., Ltd.		50	-	50	-	(2)	-	-	48
SBC PFV Co., Ltd.		10,000	-	10,000	-	-	-	-	10,000
GMG Development Co., Ltd.		3	-	3	-	-	-	-	3
ICSF (The Korea's Information Center for Savings & Finance)		156	149	-	-	(1)	-	-	148
Shinhan-Albatross Technology Investment Fund		6,000	5,942	-	-	196	(306)	-	5,832
Miraeequity-Incus Venture Business Fund No.4		2,000	1,957	-	-	(41)	-	-	1,916

(In millions of won)

14. Investments in associates (continued)

(b) Changes in investments in associates for the years ended December 31, 2019 and 2018 were as follows: (continued)

		December 31, 2019							
Associates		Acqui-sition cost	Beginning balance	Acqui-sition (redemp-tion)	Gain (loss) from disposal	Share of profit (loss) of associates	Share of other comprehe-nsive income (loss) of associates	Dividends received	Ending balance
Shinhan-Neoplux Energy Newbiz Fund	₩	8,400	3,974	4,200	-	(294)	-	-	7,880
Stassets-DA Value Healthcare Fund I		615	985	(384)	-	(17)	-	-	584
	₩	117,546	109,742	16,110	425	(763)	3,356	(691)	128,179

(*1) Redemption represents disposal amounts by reclassification without any cash flows.
(*2) They are the items with a carrying amount of zero due to cumulative unrealized losses since initial acquisition.
(*3) No gain or loss on equity method has occurred since the term debt-equity swap was acquired during the year.

(In millions of won)

14. Investments in associates (continued)

(b) Changes in investments in associates for the years ended December 31, 2019 and 2018 were as follows: (continued)

	December 31, 2018							
Associates	Acquisition cost	Beginning balance	Acquisition (redemption)	Gain (loss) from disposal	Share of profit (loss) of associates	Share of other comprehensive income (loss) of associates	Dividends received	Ending balance
BNP Paribas Cardif Life Insurance Co., Ltd.	₩ 42,204	52,652	-	-	771	(1,540)	(2,042)	49,841
Daewontos Co., Ltd.	-	-	-	-	-	-	-	-
Inhee Co., Ltd. (*1)	-	205	-	(205)	-	-	-	-
DAEGY Electrical Construction Co., Ltd.	-	109	-	-	-	-	-	109
YEONWOONG SYSTEM	-	77	-	-	(1)	-	-	76
DOODOO LOGITECH	-	163	-	-	(119)	-	-	44
Neoplux Technology Valuation Investment Fund	19,068	13,470	6,000	-	(242)	(490)	-	18,738
JAEYOUNG SOLUTECH Co., Ltd. (*1)	6,238	3,848	(9,375)	6,500	(836)	(137)	-	-
Partners 4th Growth Investment Fund	16,697	13,390	2,596	-	626	-	-	16,612
KTB Newlake Global Healthcare PEF	7,036	1,769	4,980	-	(159)	-	-	6,590
Jaeyang Industry	-	-	-	-	-	-	-	-
Tigris-Aurum Fund 1	1,500	1,436	-	-	(45)	-	-	1,391
Chungyoung INC.	-	-	-	-	-	-	-	-
DAEKWANG SEMICON DUCTOR Co., Ltd.	-	3,825	-	-	(491)	-	-	3,334
Branbuil Co., Ltd. (*1)	-	-	(163)	163	-	-	-	-
Songrim Co., Ltd.	-	48	-	-	(48)	-	-	-
Taihan Industrial System Co., Ltd.	-	-	-	-	-	-	-	-
Hyungje Art Printing	-	-	-	-	-	-	-	-
ICSF (The Korea's Information Center for Savings & Finance)	156	156	-	-	(7)	-	-	149
Shinhan-Albatross Technology Investment Fund	6,000	1,782	4,000	-	(146)	306	-	5,942
Loggia	37	26	-	(26)	-	-	-	-
Quantum-Nvestor Fund No.1 (*1)	1,000	993	(1,000)	738	-	-	(731)	-
Lodestone 1st Private Equity Fund (*1)	2,000	1,991	(2,170)	179	-	-	-	-
Miraeequity-Incus Venture Business Fund No.4	2,000	1,996	-	-	(39)	-	-	1,957
LB Technology Fund 1 (*1)	1,000	1,000	(820)	(180)	-	-	-	-
Shinhan-Neoplux Energy Newbiz Fund	4,200	1,400	2,800	-	(226)	-	-	3,974
Stassets-DA Value Healthcare Fund I	1,000		1,000	-	(15)	-	-	985
	110,136	100,336	7,848	7,169	(977)	(1,861)	(2,773)	109,742

(In millions of won)

14. Investments in associates (continued)

(b) Changes in investments in associates for the years ended December 31, 2019 and 2018 were as follows: (continued)

(*1) Redemption represents disposal amounts by reclassification without any cash flows.

(c) Condensed financial statements of associates as of December 31, 2019 and 2018 were as follows:

	December 31, 2019					
Associates	Assets	Liabilities	Operating revenue	Profit (loss) for the year	Other comprehensive income (loss)	Total comprehensive income (loss)
BNP Paribas Cardif Life Insurance Co., Ltd.	₩ 3,896,875	3,545,682	37,067	(3,919)	24,402	20,483
KOREA FINANCE SECURITY	32,079	10,386	64,964	(1,297)	-	(1,297)
DAEGY Electrical Construction Co., Ltd.	590	193	-	-	-	-
DOODOO LOGITECH	37	12	115	(133)	-	(133)
Neoplux Technology Valuation Investment Fund	49,890	738	3,953	(2,078)	-	(2,078)
Partners 4th Growth Investment Fund	60,775	1,106	14	(1,904)	-	(1,904)
KTB Newlake Global Healthcare PEF	37,187	151	387	(349)	-	(349)
DAEKWANG SEMICON DUCTOR Co., Ltd.	23,507	7,358	1,248	248	-	248
Songrim Co., Ltd.	1,003	1,065	548	(39)	-	(39)
Multimedia Tech Co., Ltd.	-	-	-	-	-	-
Hyungje art printing	866	1,130	253	(144)		(144)
MIEL Co., Ltd.	-	-	-	-	-	-
WON JIN HOME PLAN Co., Ltd.	3,845	3,268	2,945	592	262	854
IL GU FARM Co., Ltd.	565	881	14,954	77	-	77
Korea Credit Bureau	95,764	20,075	66,314	10,604	-	10,604
Goduck Gangil1 PFV Co., Ltd.	351,518	346,896	-	(179)	-	(179)
SBC PFV Co., Ltd.	120,000	40,000	-	-	-	-
GMG Development Co., Ltd.	300	240	-	-	-	-
ICSF (The Korea's Information Center for Savings & Finance)	461	4	100	(4)	-	(4)
Shinhan-Albatross Technology Investment Fund	17,681	182	1,263	551	(917)	(366)
Miraeequity-Incus Venture Business Fund No.4	8,143	-	3	(172)	-	(172)
Shinhan-Neoplux Energy Newbiz Fund	33,791	18	26	(1,259)	-	(1,259)
Stassets-DA Value Healthcare Fund I	2,423	1	1	(66)	-	(66)
	₩ 4,737,300	3,979,386	194,155	529	23,747	24,276

(In millions of won)

14. Investments in associates (continued)

(c) Condensed financial statements of associates as of December 31, 2019 and 2018 were as follows: (continued)

		December 31, 2018					
Associates		Assets	Liabilities	Operating revenue	Profit (loss) for the year	Other comprehensive income (loss)	Total comprehensive income (loss)
BNP Paribas Cardif Life Insurance Co., Ltd.	₩	3,995,746	3,662,567	53,756	5,191	(10,268)	(5,077)
Daewontos Co., Ltd.		400	2,492	-	-	-	-
DAEGY Electrical Construction Co., Ltd.		590	193	-	-	-	-
YEONWOONG SYSTEM		492	147	-	(6)	-	(6)
DOODOO LOGITECH		204	45	536	(427)	-	(427)
Neoplux Technology Valuation Investment Fund		57,018	804	390	(724)	(1,969)	(2,693)
Partners 4th Growth Investment Fund		67,403	954	4,424	3,025	-	3,025
KTB Newlake Global Healthcare PEF		32,508	123	69	(793)	-	(793)
Jaeyang Industry		2,146	4,717	-	-	-	-
Tigris-Aurum Fund 1		5,142	42	-	(165)	-	(165)
DAEKWANG SEMICON DUCTOR Co., Ltd.		25,459	9,537	15,794	(2,341)	-	(2,341)
Songrim Co., Ltd.		2,288	2,311	1,898	(164)	-	(164)
Taihan Industrial System Co., Ltd.		12,317	13,478	48,457	433	-	433
Hyungje art printing		1,020	1,139	2,688	(1,171)	-	(1,171)
ICSF (The Korea's Information Center for Savings & Finance)		703	241	102	(22)	-	(22)
Shinhan-Albatross Technology Investment Fund		18,009	182	299	(435)	917	482
Miraeequity-Incus Venture Business Fund No.4		8,358	43	-	(171)	-	(171)
Shinhan-Neoplux Energy Newbiz Fund		17,347	315	19	(968)	-	(968)
Stassets-DA Value Healthcare Fund I		4,089	1	1	(62)	-	(62)
	₩	4,251,239	3,699,331	128,433	1,200	(11,320)	(10,120)

(In millions of won)

14. Investments in associates (continued)

(d) Reconciliation of associates' financial information presented to the carrying amount of the Group's interest in the associates as of December 31, 2019 and 2018 were as follows:

		December 31, 2019					
Associates		Net assets (A)	Proportion of ownership interest (B)	(A) x (B)	Unrealized income and expenses	Other adjustments	Carrying amount
BNP Paribas Cardif Life Insurance Co., Ltd.	₩	351,193	14.99%	52,679	(79)	-	52,600
KOREA FINANCE SECURITY		21,693	14.91%	3,235	-	-	3,235
DAEGY Electrical Construction Co., Ltd.		397	27.45%	109	-	-	109
DOODOO LOGITECH		25	27.96%	7	-	-	7
Neoplux Technology Valuation Investment Fund		49,152	33.33%	16,384	-	-	16,384
Partners 4th Growth Investment Fund		59,669	25.00%	14,917	-	-	14,917
KTB Newlake Global Healthcare PEF (*1)		37,036	20.00%	7,408	-	113	7,521
DAEKWANG SEMICON DUCTOR Co., Ltd.		16,179	20.94%	3,387	-	-	3,387
Songrim Co., Ltd. (*2)		(62)	35.34%	(22)	-	22	-
Multimedia Tech Co., Ltd.		89	21.06%	19	-	-	19
Hyungje art printing (*2)		(264)	31.54%	(83)	-	83	-
MIEL Co., Ltd.		(119)	28.77%	(34)	-	34	-
WON JIN HOME PLAN Co., Ltd.		576	31.69%	183	-	-	183
IL GU FARM Co., Ltd. (*2)		(316)	28.47%	(90)	-	90	-
Korea Credit Bureau		75,689	4.50%	3,406	-	-	3,406
Goduck Gangil1 PFV Co., Ltd.		4,622	1.04%	48	-	-	48
SBC PFV Co., Ltd.		80,000	12.50%	10,000	-	-	10,000
GMG Development Co., Ltd.		60	5.00%	3	-	-	3
ICSF (The Korea's Information Center for Savings & Finance)		457	32.26%	148	-	-	148
Shinhan-Albatross Technology Investment Fund		17,499	33.33%	5,832	-	-	5,832
Miraeequity-Incus Venture Business Fund No.4		8,143	23.53%	1,916	-	-	1,916
Shinhan-Neoplux Energy Newbiz Fund		33,773	23.33%	7,880	-	-	7,880
Stassets-DA Value Healthcare Fund I		2,423	24.10%	584	-	-	584
	₩	757,914		127,916	(79)	342	128,179

(*1) Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable assets and liabilities on acquisition of the investment.
(*2) Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable net assets on acquisition of the investment as well as the unrecognized share of accumulated losses resulting from the Group's discontinuing the use of equity method since its interest was reduced to zero by the accumulated losses of the investee.

(In millions of won)

14. Investments in associates (continued)

(d) Reconciliation of associates' financial information presented to the carrying amount of the Group's interest in the associates as of December 31, 2019 and 2018 were as follows: (continued)

		December 31, 2018					
Associates		Net assets (A)	Proportion of ownership interest (B)	(A) x (B)	Unrealized income and expenses	Other adjustments	Carrying amount
BNP Paribas Cardif Life Insurance Co., Ltd.	₩	333,178	14.99%	49,977	(136)	-	49,841
Daewontos Co., Ltd. (*1)		(2,092)	36.33%	(760)	-	760	-
DAEGY Electrical Construction Co., Ltd.		397	27.45%	109	-	-	109
YEONWOONG SYSTEM		345	21.77%	76	-	-	76
DOODOO LOGITECH		158	27.96%	44	-	-	44
Neoplux Technology Valuation Investment Fund		56,214	33.33%	18,738	-	-	18,738
Partners 4th Growth Investment Fund		66,449	25.00%	16,612	-	-	16,612
KTB Newlake Global Healthcare PEF (*2)		32,385	20.00%	6,477	-	113	6,590
Jaeyang Industry (*3)		(2,571)	25.90%	(666)	-	666	-
Tigris-Aurum Fund 1		5,101	27.27%	1,391	-	-	1,391
DAEKWANG SEMICON DUCTOR Co., Ltd.		15,922	20.94%	3,334	-	-	3,334
Songrim Co., Ltd. (*3)		(23)	35.34%	(8)	-	8	-
Taihan Industrial System Co., Ltd. (*2)		(1,161)	28.29%	(328)	-	328	-
Hyungje art printing (*3)		(119)	31.54%	(38)	-	38	-
ICSF (The Korea's Information Center for Savings & Finance)		462	32.26%	149	-	-	149
Shinhan-Albatross Technology Investment Fund		17,827	33.33%	5,942	-	-	5,942
Miraeequity-Incus Venture Business Fund No.4		8,316	23.53%	1,957	-	-	1,957
Shinhan-Neoplux Energy Newbiz Fund		17,032	23.33%	3,974	-	-	3,974
Stassets-DA Value Healthcare Fund I		4,089	24.10%	985	-	-	985
	₩	551,909		107,965	(136)	1,913	109,742

(*1) Other adjustments represent the unrecognized share of accumulated losses resulting from the Group's discontinuing the use of equity method since its interest was reduced to zero by the accumulated losses of the investee.

(*2) Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable assets and liabilities on acquisition of the investment.

(*3) Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable net assets on acquisition of the investment as well as the unrecognized share of accumulated losses resulting from the Group's discontinuing the use of equity method since its interest was reduced to zero by the accumulated losses of the investee.

(In millions of won)

14. Investments in associates (continued)

(e) The unrecognized equity method losses and accumulated unrecognized equity losses for the years ended December 31, 2019 and 2018 were as follows :

		2019	
		Unrecognized equity method loss	Accumulated unrecognized equity method loss
Songrim Co., Ltd.	₩	(14)	(22)
Hyungje Art Printing		(45)	(83)
MIEL Co., Ltd.		(34)	(34)
IL GU FARM Co., Ltd.		(90)	(90)
	₩	(183)	(229)

		2018	
		Unrecognized equity method loss	Accumulated unrecognized equity method loss
Daewontos Co., Ltd.	₩	-	(760)
Jaeyang industry Co., Ltd.		-	(18)
Songrim Co., Ltd.		(8)	(8)
Hyungje art printing		(38)	(38)
Total	₩	(46)	(824)

(In millions of won)

15. Investment properties

(a) Investment properties as of December 31, 2019 and 2018 were as follows:

		December 31, 2019		
		Acquisition cost	Accumulated depreciation	Book value
Land	₩	488,845	-	488,845
Buildings		226,519	(79,844)	146,675
	₩	715,364	(79,844)	635,520

		December 31, 2018		
		Acquisition cost	Accumulated depreciation	Book value
Land	₩	417,994	-	417,994
Buildings		222,848	(69,549)	153,299
	₩	640,842	(69,549)	571,293

(b) Fair value of investment properties as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Investment properties (*1)	₩	635,406	605,107

(*1) Fair value of investment properties is estimated based on the recent market transactions and certain significant unobservable inputs. Accordingly, fair value of investment properties is classified as level 3.

(c) Income and expenses on investment properties for the years ended December 31, 2019 and 2018 were as follows

		2019	2018
Rental income	₩	27,859	27,559
Direct operating expenses for investment properties that generate rental income		5,604	5,736

(In millions of won)

16. Other assets

Other assets as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Unsettled trades and accounts receivable	₩	6,826,245	5,865,729
Domestic exchange settlement receivables		4,207,371	5,992,383
Guarantee deposits		1,010,755	1,020,548
Accrued income		1,436,563	1,290,791
Prepaid expense		93,458	104,076
Suspense payments		67,526	69,600
Sundry assets		138,853	125,668
Others		4,757	2,799
Present value discount		(33,431)	(36,355)
Allowance for impairment		(17,679)	(25,612)
	₩	13,734,418	14,409,627

17. Non-current assets held for sale

(a) Non-current assets held for sale as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Property and equipment	₩	11,853	7,561

The Group classified property and equipment which were highly expected to be sold within one year from December 31, 2019, as non-current assets held for sale.

(b) The cumulative income or loss recognized in other comprehensive income

There were no cumulative income or loss recognized in other comprehensive income relating to non-current assets held for sale as of December 31, 2019 and 2018.

(In millions of won)

18. Pledged assets

(a) Assets pledged as collateral as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Loans:			
Loans at amortized cost	₩	128,163	129,210
Securities (*1):			
Securities at FVOCI		364,490	411,371
Securities at amortized cost		12,598,566	10,565,279
		12,963,056	10,976,650
Property and equipment (*2)		5,030	5,784
	₩	13,096,249	11,111,644

(*1) The carrying amounts of assets pledged as collateral that the transferees had the right to sell or repledge regardless of the Group's default as of December 31, 2019 and 2018 were ₩455,865 million and ₩684,013 million, respectively.
(*2) The amounts were based on the notification amount of pledge.

(b) The fair value of collateral held that the Group has the right to sell or repledge regardless of pledger's default as of December 31, 2019 and 2018 were as follows:

		December 31, 2019		December 31, 2018	
		Collateral held	Collateral sold or repledged	Collateral held	Collateral sold or repledged
Securities	₩	2,007,036	-	5,190,387	-

(In millions of won)

19. Deposits

Deposits as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Demand deposits:			
Korean won	₩	101,691,275	92,939,482
Foreign currencies		13,525,062	12,058,823
		115,216,337	104,998,305
Time deposits:			
Korean won		135,445,356	119,544,345
Foreign currencies		18,605,817	16,109,446
Gain on fair value hedge		(102,493)	(167,226)
		153,948,680	135,486,565
Negotiable certificates of deposits		9,694,816	9,213,652
Note discount deposits		4,747,587	4,087,530
CMA		3,987,372	4,084,709
Others		20,477	21,963
	₩	287,615,269	257,892,724

20. Financial liabilities at fair value through profit or loss

(a) Financial liabilities at FVTPL as of December 31, 2019 and 2018 were as follows:

	December 31, 2019			December 31, 2018		
	Interest rate (%)		Amount	Interest rate (%)		Amount
Securities sold:						
Debt securities	1.25	₩	39,909	2.75	₩	20,223
Equity securities	-		411	-		402
Gold/silver deposits	-		467,761	-		458,934
		₩	508,081		₩	479,559

(b) Net gain (loss) on financial liabilities at FVTPL for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Securities sold:			
Gain on sale	₩	285	231
Loss on sale		(202)	(384)
Gain on valuation		-	27
Loss on valuation		(77)	(28)
		6	(154)
Gold/silver deposits:			
Gain on sale		4,644	1,611
Loss on sale		(475)	(217)
Gain on valuation		-	293
Loss on valuation		(91,025)	(15,185)
		(86,856)	(13,498)
	₩	(86,850)	(13,652)

(In millions of won)

21. Borrowings

Borrowings as of December 31, 2019 and 2018 were as follows:

	December 31, 2019			December 31, 2018		
	Interest rate (%)		Amount	Interest rate (%)		Amount
Call money:						
Korean won	0.00	₩	-	1.73	₩	120,000
Foreign currencies	0.00~5.25		538,247	0.00~6.85		840,162
			538,247			960,162
Bill sold	0.80~1.60		19,070	0.75~1.70		14,536
Bonds sold under repurchase agreements:						
Korean won	1.31		958	1.82		1,027
Foreign currencies	2.28~5.40		102,531	2.63~6.50		82,001
			103,489			83,028
Borrowings in Korean won:						
Borrowings from Bank of Korea	0.50~0.75		2,386,939	0.50~0.75		2,288,991
Others	0.00~4.30		6,149,615	0.00~4.25		6,561,883
			8,536,554			8,850,874
Borrowings in foreign currencies:						
Overdraft due to banks	0.00		86,791	0.00		77,673
Borrowings from banks	0.00~7.50		6,456,429	0.00~9.20		4,576,198
Sub-lease	0.00		9,856	0.00~3.34		84,017
Others	1.94~7.35		1,576,459	2.60~7.90		1,510,190
			8,129,535			6,248,078
Deferred origination costs			(1,011)			(1,857)
		₩	17,325,884		₩	16,154,821

(In millions of won)

22. Debt securities issued

Debt securities issued as of December 31, 2019 and 2018 were as follows:

	December 31, 2019			December 31, 2018		
	Interest rate (%)		Amount	Interest rate (%)		Amount
Debt securities issued in Korean won:						
Debt securities issued	0.71~8.00	₩	28,155,393	0.00~8.00	₩	23,425,572
Subordinated debt securities issued	2.20~4.60		3,200,145	2.20~4.60		3,200,145
Gain on fair value hedges			(87,692)			(206,985)
Discount on debt securities issued			(40,736)			(62,944)
			31,227,110			26,355,788
Debt securities issued in foreign currencies:						
Debt securities issued	0.01~4.01		3,882,419	0.02~4.01		3,356,032
Subordinated debt securities issued	3.75~5.00		2,813,406	3.75~5.00		2,271,799
Gain on fair value hedges			141,264			(55,251)
Discount on debt securities issued			(34,331)			(29,102)
			6,802,758			5,543,478
		₩	38,029,868		₩	31,899,266

(In millions of won)

23. Defined benefit liabilities (assets)

(a) Defined benefit plan assets and liabilities

The Group provides a defined benefit plan for qualified employees. Plan assets are managed by trust companies, funds, and other similar companies that are subject to local regulations and each country's business environment.

Defined benefit plan assets and liabilities as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Present value of defined benefit obligations	₩	1,502,153	1,370,151
Fair value of plan assets		(1,445,985)	(1,299,502)
Net defined benefit liabilities	₩	56,168	70,649

(b) Changes in the present value of defined benefit obligations for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Beginning balance	₩	1,370,151	1,263,699
Current service cost		127,273	104,538
Interest expense		42,507	44,471
Remeasurements (*1)(*2)		21,637	65,504
Effects of foreign currency movements		423	(853)
Benefits paid by the plan		(61,050)	(106,995)
Others		1,212	(213)
Ending balance	₩	1,502,153	1,370,151

(*1) Remeasurements for the years ended December 31, 2019 consist of ₩16,048 million of actuarial gain arising from changes in demographic assumptions, ₩40,882 million of actuarial loss arising from changes in financial assumptions and ₩3,197 million of actuarial gain arising from changes in experience adjustments, respectively.
(*2) Remeasurements for the years ended December 31, 2019 consist of ₩18,399 million of actuarial loss arising from changes in demographic assumptions, ₩54,933 million of actuarial loss arising from changes in financial assumptions and ₩7,828 million of actuarial gain arising from changes in experience adjustments, respectively.

(c) Changes in the fair value of plan assets for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Beginning balance	₩	1,299,502	1,294,013
Interest income		41,324	50,725
Remeasurements		(16,618)	(31,570)
Contributions paid into the plan		180,000	92,000
Benefits paid by the plan		(58,223)	(105,666)
Ending balance	₩	1,445,985	1,299,502

(In millions of won)

23. Defined benefit liabilities (assets) (continued)

(d) The amount of major categories of the fair value of plan assets as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Deposits	₩	1,406,932	1,281,069
Others		39,053	18,433
	₩	1,445,985	1,299,502

(e) Actuarial assumptions as of December 31, 2019 and 2018 were as follows:

	December 31, 2019	December 31, 2018	Descriptions
Discount rate	2.92%	3.18%	AA0 Corporate bond yields
Future salary increasing rate	2.33% + Promotion rate	2.33% + Promotion rate	Average for last 5 years

(f) Sensitivity analysis

Sensitivity analysis of the present value fluctuations of defined benefit obligations as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	
		Change in present value when the factor rises by 100 basis points	Change in present value when the factor falls by 100 basis points
Discount rate	₩	(149,945)	175,555
Future salary increasing rate		174,804	(151,611)

		December 31, 2018	
		Change in present value when the factor rises by 100 basis points	Change in present value when the factor falls by 100 basis points
Discount rate	₩	(121,918)	140,734
Future salary increasing rate		137,918	(120,557)

(g) The maturity analysis of undiscounted retirement benefit payments for the years ended December 31, 2019 and 2018 were as follows:

	December 31, 2019					
	1 year or less	1 year~ 2 years or less	2 years~ 5 years or less	5 years~ 10 years or less	More than 10 years	Total
Salary payment amount ₩	32,759	62,556	207,240	428,824	1,391,820	2,123,199

	December 31, 2018					
	1 year or less	1 year~ 2 years or less	2 years~ 5 years or less	5 years~ 10 years or less	More than 10 years	Total
Salary payment amount ₩	58,231	80,625	277,853	395,171	1,094,529	1,906,409

(h) The weighted average durations of defined benefit obligations as of December 31, 2019 and 2018 were 11.1 years and 9.9 years, respectively.

(In millions of won)

24. Provisions

(a) Changes in provisions for unused credit commitments and financial guarantee contracts issued for the years ended December 31, 2019 and 2018 were as follows:

	2019							
	Loan commitments and other liabilities for credit			Financial guarantee contracts				
		Lifetime expected credit losses			Lifetime expected credit losses			
		12-month expected credit losses	Credit-unimpaired financial asset	Credit-impaired financial asset	12-month expected credit losses	Credit-unimpaired financial asset	Credit-impaired financial asset	Total
Beginning balance	₩	66,807	16,322	-	54,428	5,887	1,757	145,201
Transfer to 12-month expected credit losses		2,246	(2,246)	-	2,629	(2,629)	-	-
Transfer to lifetime expected credit losses		(2,319)	2,319	-	(1,245)	1,245	-	-
Transfer to impaired financial asset		(2)	-	2	(12)	-	12	-
Provision (reversal)		(1,808)	4,356	4	947	96	(943)	2,652
Foreign exchange movements		912	121	-	1,303	323	102	2,761
Others (*1)		-	-	-	1,083	633	(117)	1,599
Ending balance	₩	65,836	20,872	6	59,133	5,555	811	152,213

(*1) Other changes were mainly due to newly issued financial guarantee contracts recognized at their fair values, termination, effect of discount rate changes, etc.

(In millions of won)

24. Provisions (continued)

(a) Changes in provisions for unused credit commitments and financial guarantee contracts issued for the years ended December 31, 2019 and 2018 were as follows:

		2018						
		Loan commitments and other liabilities for credit			Financial guarantee contracts			
			Lifetime expected credit losses			Lifetime expected credit losses		
		12-month expected credit losses	Credit-unimpaired financial asset	Credit-impaired financial asset	12-month expected credit losses	Credit-unimpaired financial asset	Credit-impaired financial asset	Total
Beginning balance	₩	69,350	17,341	-	30,338	3,346	2,464	122,839
Transfer to 12-month expected credit losses		2,929	(2,929)	-	1,139	(1,139)	-	-
Transfer to lifetime expected credit losses		(2,605)	2,605	-	(1,804)	1,804	-	-
Transfer to impaired financial asset		-	-	-	(13)	-	13	-
Provision (reversal)		(3,586)	(800)	-	(3,226)	455	(690)	(7,847)
Foreign exchange movements		719	105	-	757	481	449	2,511
Others (*1)		-	-	-	27,237	940	(479)	27,698
Ending balance	₩	66,807	16,322	-	54,428	5,887	1,757	145,201

(*1) Other changes were mainly due to newly issued financial guarantee contracts recognized at their fair values, termination, effect of discount rate changes, etc.

(In millions of won)

24. Provisions (continued)

(b) Changes in provisions for the years ended December 31, 2019 and 2018 were as follows:

		2019				
		Asset retirement	Litigation	Non-financial guarantee contracts	Others	Total
Beginning balance	₩	36,770	5,773	43,471	53,501	139,515
Provision (reversal)		777	122	(19,329)	(2,417)	(20,847)
Provision used		(739)	-	-	(7,679)	(8,418)
Foreign exchange movements		-	-	1,420	382	1,802
Others (*1)		2,281	-	24	2,495	4,800
Ending balance	₩	39,089	5,895	25,586	46,282	116,852

(*1) Other changes were mainly due to the effect of discount rate changes, etc.

		2018				
		Asset retirement	Litigation	Non-financial guarantee contracts	Others	Total
Beginning balance	₩	30,874	11,850	46,340	43,567	132,631
Provision (reversal)		6,474	(971)	(2,833)	3,583	6,253
Provision used		(2,388)	(5,492)	-	(6,467)	(14,347)
Foreign exchange movements		-	386	1,677	(1,006)	1,057
Others (*1)		1,810	-	(1,713)	13,824	13,921
Ending balance	₩	36,770	5,773	43,471	53,501	139,515

(*1) Other changes were mainly due to the effect of discount rate change, etc.

(c) Asset retirement obligation liabilities represent the estimated cost to restore the existing leased properties which were discounted to the present value using the appropriate discount rate at the end of the reporting period. Disbursements of such costs were expected to incur at the end of the lease contract. Such costs were reasonably estimated using the average lease period and the average restoration expenses. The average lease period was calculated based on the past ten-year historical data of the expired leases. The average restoration expense was calculated based on the actual costs incurred for the past three years using the three-year average inflation rate.

(In millions of won)

25. Other liabilities

Other liabilities as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Accounts payable	₩	7,312,827	5,847,048
Borrowing from trust account		5,343,259	2,994,798
Accrued expenses		2,766,333	2,631,797
Liability incurred by agency relationship		1,609,675	1,306,075
Domestic exchange settlement payable		1,330,499	1,016,256
Lease liabilities (*1)		460,938	-
Account for agency business of other institutions		733,345	720,171
Guarantee deposits received		384,552	355,867
Foreign exchange settlement payables		242,643	225,921
Suspense payable		58,788	73,426
Unearned income		95,900	96,975
Withholding value-added tax and other taxes		123,640	119,190
Dividend payable		-	2,597
Sundry liabilities		65,774	46,845
Present value discount		(25,109)	(2,118)
	₩	20,503,064	15,434,848

(*1) As of December 31, 2019, the Group recognizes lease liabilities as other liabilities, and the expenses for variable lease payments that are not included in the measurement of lease liabilities were ₩189 million, cash outflows from lease liabilities were ₩208,436 million, and interest on lease liabilities were ₩7,845 million.

(In millions of won)

26. Equity

(a) Equity as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Capital stock:			
Common stock	₩	7,928,078	7,928,078
Other equity instruments:			
Hybrid bonds		997,987	698,660
Capital surplus:			
Share premium		398,080	398,080
Other capital surplus		5,084	5,084
		403,164	403,164
Capital adjustments:			
Stock options		789	4,850
Others		(3,269)	(4,204)
		(2,480)	646
Accumulated other comprehensive income (loss):			
Net change in fair value of financial assets at FVOCI		109,734	(21,118)
Share of other comprehensive income of associates, net		8,163	4,859
Foreign currency translation differences for foreign operations		(215,780)	(313,003)
Remeasurements of defined benefit plans		(305,148)	(277,435)
		(403,031)	(606,697)
Retained earnings:			
Legal reserve (*1)		2,047,515	1,835,854
Voluntary reserve (*2)		11,815,146	10,930,547
Other reserve (*3)		123,197	112,058
Unappropriated retained earnings (*4)		3,177,137	2,884,292
		17,162,995	15,762,751
Non-controlling interests		6,402	5,937
	₩	26,093,115	24,192,539

(*1) According to *the Article 40 of the Banking Act*, the Bank is required to appropriate an amount equal to a minimum of 10% of cash dividends paid for each accounting period as a legal reserve, until such reserve equals 100% of issued capital. The legal reserve is only available to reduce accumulated deficit or transfer to capital stock.

(*2) The amounts include regulatory reserve for loan loss based on separate financial statements of ₩1,961,499 million and ₩1,842,655 million as of December 31, 2019 and 2018, respectively. The amounts also include asset revaluation surplus of ₩355,898 million as of both December 31, 2019 and 2018, respectively.

(*3) Other reserve was established according to the laws applicable to some oversea branches and it may be used only to reduce their deficit.

(*4) The amounts include difference between the regulatory reserve for loan loss based on separate financial statement and the regulatory reserve for loan loss based on consolidated financial statement of ₩7,165 million and ₩5,601 million as of December 31, 2019 and 2018, respectively. Provision for regulatory reserve for loan losses are ₩226,970 million and ₩113,243 million for the years ended December 31, 2019 and 2018, respectively.

(In millions of won)

26. Equity (continued)

(b) Capital stock

Capital stock of the Bank as of December 31, 2019 and 2018 were as follows:

	December 31, 2019	December 31, 2018
Number of authorized shares	2,000,000,000 shares	2,000,000,000 shares
Par value per share in won	₩5,000	₩5,000
Number of issued shares outstanding	1,585,615,506 shares	1,585,615,506 shares

(c) Hybrid bonds

Hybrid bonds as of December 31, 2019 and 2018 were as follows:

Date of issuance	Date of maturity		Book value December 31, 2019	Book value December 31, 2018	Interest rate (%)
Hybrid bonds issued in Korean won:					
June 7, 2013	June 7, 2043	₩	299,568	299,568	4.63
June 29, 2017	Perpetual bond		129,701	129,701	3.33
June 29, 2017	Perpetual bond		69,844	69,844	3.81
October 15, 2018	Perpetual bond		199,547	199,547	3.70
February 25, 2019	Perpetual bond		299,327	-	3.30
		₩	997,987	698,660	
Dividends on hybrid bond holders		₩	33,115	25,228	
Weighted average interest rate (%)			3.73	4.36	

The above hybrid bonds are subject to early redemption option after five years or ten years from the date of issuance, and the maturity can be extended under the same condition at the maturity date by the issuer. In addition, if no dividend is paid for common shares, the agreed interest is also not paid.

(In millions of won)

26. Equity (continued)

(d) Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2019 and 2018 were as follows:

		2019						
		Items that are or may be reclassified to profit or loss			Items that will not be reclassified to profit or loss			
		Net change in fair value of financial assets at FVOCI	Share of other comprehensive income (loss) of associates, net	Foreign currency translation differences for foreign operations	Net change in fair value of financial assets at FVOCI	Share of other comprehensive income (loss) of associates, net	Remeasurements of the defined benefit plans	Total
Beginning balance	₩	24,966	4,859	(313,003)	(46,084)	-	(277,435)	(606,697)
Change due to fair value		157,276	-	-	26,622	-	-	183,898
Change due to other comprehensive income of associates			3,357					3,357
Change due to impairment		560	-	-	-	-	-	560
Change due to disposal		(18,553)	-	-	-	-	-	(18,553)
Effect of hedge accounting		(731)	-	(49,463)	-	-	-	(50,194)
Effect of foreign currency movements		-	-	140,002	293	-	-	140,295
Remeasurements of defined benefit plans		-	-	-	-	-	(38,255)	(38,255)
Amounts transferred to retained earnings		-	-	-	(7,804)	-	-	(7,804)
Effect of tax		(21,558)	(52)	6,684	(5,254)	-	10,542	(9,638)
Ending balance	₩	141,960	8,164	(215,780)	(32,227)	-	(305,148)	(403,031)

(In millions of won)

26. Equity (continued)

(d) Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2019 and 2018 were as follows: (continued)

		2018						
		Items that are or may be reclassified to profit or loss			Items that will not be reclassified to profit or loss			
		Net change in fair value of financial assets at FVOCI	Share of other comprehensive income (loss) of associates, net	Foreign currency translation differences for foreign operations	Net change in fair value of financial assets at FVOCI	Share of other comprehensive income (loss) of associates, net	Remeasurements of the defined benefit plans	Total
Beginning balance	₩	(70,683)	6,614	(334,281)	(58,379)	(28)	(207,036)	(663,793)
Change due to fair value		135,350	-	-	21,151	-	-	156,501
Change due to other comprehensive income of associates		-	(1,579)	-	-	25	-	(1,554)
Change due to impairment		3,467	-	-	-	-	-	3,467
Change due to disposal		11,910	(286)	-	-	-	-	11,624
Effect of hedge accounting		(2,365)	-	(35,879)	-	-	-	(38,244)
Effect of foreign currency movements		-	-	47,227	423	-	-	47,650
Remeasurements of defined benefit plans		-	-	-	-	-	(97,076)	(97,076)
Amounts transferred to retained earnings		-	-	-	(4,399)	13	-	(4,386)
Effect of tax		(52,713)	110	9,930	(4,880)	(10)	26,677	(20,886)
Ending balance	₩	24,966	4,859	(313,003)	(46,084)	-	(277,435)	(606,697)

(In millions of won, except for par value per share and dividend per share)

26. Equity (continued)

(e) Statements of appropriation of retained earnings for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
		Expected date of approval: March 25, 2020	Date of approval: March 26, 2019
Unappropriated retained earnings:			
Balance at beginning of year	₩	-	-
Net effect on change due to accounting policy		-	(90,616)
Transfer from other comprehensive income through the sale of securities at FVOCI		(5,658)	(3,189)
Interest on hybrid bond		(33,115)	(25,228)
Profit for the year		2,071,235	2,116,606
		2,032,462	1,997,573
Transfer from reserves:			
Voluntary reserve		9,218,897	8,453,145
		11,251,359	10,450,718
Appropriation of retained earnings:			
Legal reserve		207,124	211,661
Regulatory reserve for loan loss		234,135	118,844
Other reserve		11,827	11,139
Voluntary reserves		9,908,273	9,218,899
Loss on redemption of hybrid bond		-	175
Dividends on common stock		890,000	890,000
(Dividend per share in won: 2019 ₩561.30 (11.23%) 2018 ₩561.30 (11.23%)			
		11,251,359	10,450,718
Unappropriated retained earnings to be carried over to subsequent year	₩	-	-

These statements of appropriation of retained earnings were based on the separate financial statements of the Bank.

(f) Dividends

Dividends of common stock for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Number of issued shares outstanding		1,585,615,506	1,585,615,506
Par value per share in won	₩	5,000	5,000
Dividend rate per share		11.23%	11.23%
Dividend per share in won	₩	561.30	561.30

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(In millions of won, except for earnings per share)

26. Equity (continued)

(g) Dividends payout ratio

Dividends payout ratio for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Dividends	₩	890,000	890,000
Profit for the year (*1)		2,329,192	2,279,049
Dividends payout ratio to profit for the year		38.21%	39.05%
Profit for the year adjusted for regulatory reserve (*1)		2,102,222	1,962,108
Dividends payout ratio to profit for the year adjusted for regulatory reserve for loan loss		42.34%	45.36%

(*1) Profit for the year and profit for the year adjusted for regulatory reserve for loan loss were the amount attributable to equity holder of the Bank.

27. Regulatory reserve for loan loss

The Group should calculate and disclose regulatory reserve for loan loss, in accordance with *the Article 29-1 and 29-2 of Regulation on Supervision of Banking Business.*

(a) The regulatory reserve for loan loss as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Regulatory reserve for loan loss	₩	2,015,891	1,902,648
Provision for regulatory reserve for loan loss		226,970	113,243
	₩	2,242,861	2,015,891

(b) Profit for the year adjusted for regulatory reserve for loan loss and earnings per share adjusted for regulatory reserve for loan loss for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Provision for regulatory reserve for loan loss (*1)	₩	226,970	316,941
Profit for the year adjusted for regulatory reserve for loan loss (*2)		2,102,298	1,962,421
Earnings per share adjusted for regulatory reserve in won		1,305	1,222

(*1) The amount for the year ended December 31, 2018 was calculated based on the regulatory reserve for loan loss that retroactively reflects the effect of adoption of K-IFRS No.1109.
(*2) The adjusted reserve which reflects abovementioned loan loss is not based on K-IFRS and is calculated by assuming that the provisions of loan loss before income tax effects are reflected in net income.

(In millions of won)

28. Net interest income

(a) Net interest income for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Interest income:			
Cash and due from banks	₩	124,921	106,633
Securities at FVTPL		290,274	221,569
Securities at FVOCI		716,464	607,771
Securities at amortized cost		466,706	403,707
Loans (*1)		8,989,109	8,197,418
Others		67,258	59,627
		10,654,732	9,596,725
Interest expense: (*2)			
Deposits		(3,542,038)	(3,007,294)
Borrowings		(301,998)	(292,048)
Debt securities issued		(852,328)	(640,708)
Others		(86,581)	(70,681)
		(4,782,945)	(4,010,731)
Net interest income	₩	5,871,787	5,585,994

(*1) The amounts include an interest income from loans at FVTPL of ₩16,254 million and ₩12,462 million for the years ended December 31, 2019 and 2018.
(*2) There were no interest expense from financial liabilities at FVTPL for the years ended December 31, 2019 and 2018.

(b) Interest income recognized on impaired financial assets year ended December 31, 2019 and 2018 were as follows:

		2019	2018
Interest income:	₩	17,560	15,086

(In millions of won)

29. Net fees and commission income

Net fees and commission income for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Fees and commission income:			
Credit placement fees	₩	60,131	54,672
Commission received as electronic charge receipt		151,196	145,874
Brokerage fees		109,307	97,928
Commission received as agency		305,712	323,796
Investment banking fees		107,370	71,095
Commission received in foreign exchange activities		196,302	189,017
Asset management fees from trust accounts		238,246	192,422
Guarantee fees		78,642	69,729
Others		120,641	113,219
		1,367,547	1,257,752
Fees and commission expense:			
Credit-related fees		(39,011)	(35,006)
Brand-related fees		(35,530)	(34,769)
Service-related fees		(33,105)	(25,748)
Trading and brokerage fees		(9,640)	(9,430)
Commission paid in foreign exchange activities		(46,618)	(38,722)
Others		(86,251)	(77,544)
		(250,155)	(221,219)
Net fees and commission income	₩	1,117,392	1,036,533

30. Dividend income

Dividend income for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Securities at FVTPL	₩	2,820	3,905
Securities at FVOCI		12,135	11,757
	₩	14,955	15,662

(In millions of won)

31. Gain and loss on financial instruments at fair value through profit or loss

Gain and loss on financial instruments at FVTPL for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Financial instruments at FVTPL			
Debt:			
Gain on valuation of debt securities	₩	81,904	101,439
Gain on sale of debt securities		83,398	52,642
Loss on valuation of debt securities		(54,147)	(38,178)
Loss on sale of debt securities		(47,017)	(44,726)
Others		100,005	71,308
		164,143	142,485
Equity:			
Gain on valuation of equity securities		5,054	25,778
Gain on sale of equity securities		7,963	31,564
Loss on valuation of equity securities		(10,837)	(13,080)
Loss on sale of equity securities		(1,809)	(17,900)
		371	26,362
Gold/silver:			
Gain on valuation of gold/silver deposits		28,803	19,667
Gain on sale of gold/silver deposits		4,644	1,611
Loss on valuation of gold/silver deposits		(91,025)	(15,473)
Loss on sale of gold/silver deposits		(475)	(217)
		(58,053)	5,588
Loans at FVTPL:			
Gain on valuation of loans		4,046	5,292
Gain on sale of loans		14,508	12,181
Loss on valuation of loans		(2,856)	(1,225)
Loss on sale of loans		(2,484)	(2,420)
		13,214	13,828
		119,675	188,263
Derivatives			
Foreign currency related:			
Gain on valuation and transaction		7,823,821	5,855,531
Loss on valuation and transaction		(7,712,868)	(5,682,626)
		110,953	172,905
Interest rates related:			
Gain on valuation and transaction		524,405	453,291
Loss on valuation and transaction		(545,101)	(450,679)
		(20,696)	2,612
Equity related:			
Gain on valuation and transaction		15,692	20,203
Loss on valuation and transaction		(14,724)	(10,863)
		968	9,340
Commodity related:			
Gain on valuation and transaction		34,557	5,532
Loss on valuation and transaction		(11,560)	(20,141)
		22,997	(14,609)
		114,222	170,248
Net gain on financial instruments at FVTPL	₩	233,897	358,511

(In millions of won)

32. General and administrative expenses

General and administrative expenses for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Employee benefits:			
Short and long term employee benefits	₩	1,774,859	1,787,842
Post-employee defined benefits		128,455	98,284
Post-employee defined contributions		418	154
Termination benefits		93,712	90,484
		1,997,444	1,976,764
Amortization:			
Depreciation		123,784	118,567
Amortization of intangible assets		44,292	43,887
Depreciation of right-of-use assets		235,785	-
		403,861	162,454
Other general and administrative expenses:			
Rent		53,586	283,430
Service contract expenses		256,347	252,445
Taxes and dues		100,603	84,094
Advertising		81,193	74,262
Electronic data processing expenses		53,449	58,096
Others		195,923	170,241
		741,101	922,568
	₩	3,142,406	3,061,786

(In millions of won, except for fair value and share data)

33. Share-based payments

(a) Stock options granted as of December 31, 2019 were as follows:

	5th grant	6th grant	7th grant
Grant date	March 21, 2006	March 20, 2007	March 19, 2008
Exercise price in won (*1)	₩38,829	₩54,560	₩49,053
Number of shares granted	2,157,600	715,500	332,850
Contractual exercise period	2017.05.18 ~ 2019.08.21	2017.05.18 ~ 2020.08.19	2017.05.18 ~ 2021.05.17 2017.09.18 ~ 2021.09.17
Changes in number of shares granted:			
Outstanding at December 31, 2018	2,500	50,513	26,233
Exercised	2,500	-	4,759
Outstanding at December 31, 2019 (*2)	-	50,513	21,474
Fair value in won (*3)	-	₩88	Expiration date 2021.05.17 : ₩ 1,122 Expiration date 2021.09.17 : ₩ 1,301

(*1) As of December 31, 2019, the granted shares were fully vested, and the weighted-average exercise price of 71,987 options outstanding was ₩52,917.
(*2) As of December 31, 2019, 4,759 rights of exercise for 7th grant were cancelled.
(*3) As of December 31, 2019, the fair value consists of intrinsic value and time value, and suspended grants were evaluated based on the intrinsic value, which is the difference between the closing price of Shinhan Financial Group and the exercise price.

(b) Equity-settled share-based payments

i) Equity-settled share-based payments as of December 31, 2019 were as follows:

	Contents	
Grant year	2010 ~ 2013	2014~
Type (*1)	Equity-settled share-based payment	Equity-settled share-based payment
Service period	Upon appointment and promotion since April 1, 2010 (Within 3 years from grant date)	Upon appointment and promotion since January 1, 2014 (Within 1 year from grant date)
Performance conditions (*2)	Increase rate of stock price and achievement of target ROE	Increase rate of stock price and achievement of target ROE

(*1) The Group granted shares of Shinhan Financial Group. According to the commitment, the amount that the Group must pay to the Shinhan Financial Group was recognized in liabilities, and the difference between the amount recognized in liabilities and the compensation cost based on equity-settled share-based payments was recognized in equity.
(*2) ROE : Return on Equity

(In millions of won, except for fair value and share data)

33. Share-based payments (continued)

(b) Equity-settled share-based payments (continued)

ii) Granted shares and the fair value of grant date as of December 31, 2019 were as follows:

Grant date	Grant shares	Fair value (*1) (in won)	Estimated shares (*2)
January 1, 2014	109,800	47,300	2,364
January 1, 2015	156,700	44,500	2,300
March 18, 2015	16,800	42,650	13,300
May 22, 2015	5,300	42,800	3,251
January 1, 2016	221,900	39,000	213,320
January 1, 2017	221,300	45,300	189,928
January 23, 2017	2,700	45,600	2,505
March 7, 2017	17,400	46,950	14,092
March 24, 2017	8,100	49,000	6,177
June 1, 2017	2,700	49,250	1,551
July 5, 2017	2,700	49,550	1,301
July 6, 2017	2,700	49,200	2,136
January 1, 2018	227,500	49,400	212,027
January 24, 2018	-	52,700	1,106
January 1, 2019	293,806	39,600	252,849
March 26, 2019	23,410	42,750	16,579
April 1, 2019	3,696	43,750	2,560
June 1, 2019	4,731	44,450	1,020
July 4, 2019	7,392	44,450	3,370
July 8, 2019	3,696	43,650	1,648
	1,332,331		943,384

(*1) The fair value per share was evaluated based on the closing price of Shinhan Financial Group at each grant date. As of December 31, 2019, the fair value per share data evaluated by Shinhan Financial Group amounted to ₩43,350.

(*2) Grant shares at grant date were adjusted pursuant to increase rate of stock price (33.4% to 2013, 20.0% after 2014) and achievement of target ROE (66.6% to 2013, 80.0% after 2014) based on standard quantity applicable to the days of service among specified period of service, which allows for the determination of acquired quantity at the end of the operation period.

(In millions of won)

33. Share-based payments (continued)

(c) Stock compensation costs calculated for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Compensation costs recorded for the year	₩	11,245	11,209

(d) Accrued expenses of the stock compensation costs and residual compensation costs as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Accrued expenses	₩	39,747	36,446

34. Net other operating expenses

Net other operating expenses for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Other operating income			
Gain on sale of assets:			
Loans at amortized cost	₩	11,916	26,872
Written-off loans		1,430	13,119
		13,346	39,991
Others:			
Gain on hedge activity from hedged items		29,722	112,579
Gain on hedge activity from hedging instruments		410,131	166,934
Reversal of allowance for acceptances and guarantee		19,329	2,833
Reversal of other allowance		1,518	-
Others		6,757	32,656
		467,457	315,002
		480,803	354,993
Other operating expense			
Loss on sale of assets:			
Loans at amortized cost		(27,096)	(13,991)
Others:			
Loss on hedge activity from hedged items		(400,509)	(189,152)
Loss on hedge activity from hedging instruments		(35,337)	(91,178)
Provision for other allowance		-	(9,086)
Contribution to fund		(302,994)	(275,336)
Deposit insurance fee		(299,159)	(305,860)
Others		(296,760)	(155,611)
		(1,334,759)	(1,026,223)
		(1,361,855)	(1,040,214)
Net other operating expenses	₩	(881,052)	(685,221)

(In millions of won)

35. Net non-operating income

Net non-operating income for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Non-operating income			
Gain on sale of assets:			
Property and equipment	₩	1,602	11,987
Intangible assets		5,347	50
Investment properties		-	4,707
Non-current assets held for sale		57	80
Assets not used for business purpose		-	-
		7,006	16,824
Investments in associates:			
Gain from disposition		1,124	12,991
Others:			
Rental income on investment property		27,859	27,559
Others		50,173	26,834
		78,032	54,393
		86,162	84,208
Non-operating expenses			
Loss on sale of assets:			
Property and equipment		(130)	(1,687)
Intangible assets		(5)	(21)
Investment properties		-	(1,623)
Non-current assets held for sale		-	(1,403)
		(135)	(4,734)
Investments in associates:			
Loss on disposal		(2,277)	(393)
		(2,277)	(393)
Others:			
Investment properties depreciation		(11,004)	(10,377)
Donations		(71,859)	(59,902)
Impairment loss on intangible assets		(151,523)	-
Others		(34,994)	(26,107)
		(269,380)	(96,386)
		(271,792)	(101,513)
Net non-operating expenses	₩	(185,630)	(17,305)

(In millions of won)

36. Income tax expense

(a) The components of income tax expense of the Group for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Current income tax expense	₩	767,958	588,655
Deferred taxes arising from changes in temporary differences		(57,852)	293,870
Deferred taxes arising from utilization of expired unused tax losses		45,633	6,947
Tax adjustment charged or credited directly to equity		(8,097)	(22,430)
Income tax expense	₩	747,642	867,042

(b) The income tax expense calculated by applying statutory tax rates to the Group's taxable income differs from the actual tax expense in the consolidated statements of income for the years ended December 31, 2019 and 2018 for the following reasons:

		2019	2018
Profit before income tax	₩	3,076,910	3,146,404
Statutory tax rate		27.50%	27.50%
Income tax expense at statutory tax rates		835,787	854,898
Adjustments:			
Non-taxable income		(2,889)	(30,738)
Non-deductible expense		7,093	9,620
Decrease resulting from consolidated corporate tax system		(62,401)	(34,176)
Income tax paid (refund)		(17,763)	39,986
Others		(12,185)	27,452
Income tax expense	₩	747,642	867,042
Effective tax rate		24.30%	27.56%

(In millions of won)

36. Income tax expense (continued)

(c) Changes in temporary differences and deferred tax assets (liabilities) for the years ended December 31, 2019 and 2018 were as follows:

		2019				
		Beginning Balance	Decreases	Increases	Ending balance	Deferred tax assets (liabilities) (*1)
Accrued income	₩	(644,318)	(644,318)	(651,553)	(651,553)	(179,177)
Accounts receivable		(88,065)	(88,065)	(96,013)	(96,013)	(26,404)
Securities at FVTPL		93,830	72,059	74,382	96,153	26,442
Securities at FVOCI		278,317	(22,541)	132,198	433,056	119,090
Investments in associates and subsidiaries(*2)		(612,345)	(612,345)	(710,889)	(710,889)	(195,494)
Deferred loan origination costs and fees		(497,515)	(497,515)	(498,779)	(498,779)	(137,164)
Revaluation and depreciation on property and equipment		(439,598)	(15,030)	19,891	(404,677)	(111,250)
Derivative liabilities		(179,207)	(174,721)	(240,860)	(245,346)	(67,470)
Deposits		101,951	53,077	62,550	111,424	30,641
Accrued expenses		283,697	293,116	274,764	265,345	72,970
Defined benefit obligations		1,249,457	58,223	189,124	1,380,358	379,599
Plan assets		(1,267,932)	(58,223)	(220,512)	(1,430,221)	(393,310)
Other provisions		177,823	148,900	149,060	177,983	48,945
Allowance for guarantees and acceptance		105,542	141,434	126,975	91,083	25,048
Allowance for advanced depreciation		(177,137)	-	-	(177,137)	(48,713)
Allowance for expensing depreciation		(1,691)	(232)	-	(1,459)	(401)
Net change in fair value of securities at FVOCI		21,341	(245,501)	(130,519)	136,323	37,489
Donation payables		78,750	133,915	188,659	133,494	36,711
Allowance and bad debt		162,884	126,646	65,321	101,559	34,158
Compensation expenses associated with stock option		178	61	(8)	109	30
Fictitious dividends		4,060	-	366	4,426	1,217
Others		148,386	713,414	734,708	169,680	46,663
		(1,201,592)	(617,646)	(531,135)	(1,115,081)	(300,380)
Expired unused tax losses						
Appropriation by extinctive prescription of deposit		1,255,777	165,941	-	1,089,836	299,706
Temporary differences not qualified for deferred tax assets or liabilities:						
Investments in associates and Subsidiaries (*2)		(685,456)	-	(91,679)	(777,135)	(213,709)
	₩	739,641	(451,705)	(439,456)	751,890	213,035

(*1) Deferred tax assets of overseas subsidiaries have increased by ₩1,530 million due to foreign currency exchange rate changes.
(*2) The effect of income taxes by the valuation of equity method was reasonably estimated based on the both plausibility and the applicable amount of deferred income tax belonging to each associate investee.

(In millions of won)

36. Income tax expense (continued)

(c) Changes in temporary differences and deferred tax assets (liabilities) for the years ended December 31, 2019 and 2018 were as follows: (continued)

		2018				
		Beginning Balance	Decreases	Increases	Ending balance	Deferred tax assets (liabilities) (*1)
Accrued income	₩	(479,275)	(479,275)	(644,318)	(644,318)	(177,187)
Accounts receivable		(60,062)	(60,062)	(88,065)	(88,065)	(24,218)
Securities at FVTPL		(49,926)	(106,847)	36,909	93,830	25,803
Securities at FVOCI		829,525	401,295	(149,913)	278,317	76,537
Investments in associates and subsidiaries		(400,935)	(400,935)	(612,345)	(612,345)	(168,395)
Deferred loan origination costs and fees		(427,937)	(427,937)	(497,515)	(497,515)	(136,817)
Revaluation and depreciation on property and equipment		(449,332)	(4,043)	5,691	(439,598)	(120,469)
Derivative liabilities		(132,214)	(148,734)	(195,727)	(179,207)	(49,282)
Deposits		101,468	15,498	15,981	101,951	28,036
Accrued expenses		426,001	426,001	283,697	283,697	78,017
Defined benefit obligations		1,142,677	105,667	212,447	1,249,457	343,601
Plan assets		(1,180,248)	(88,188)	(175,872)	(1,267,932)	(348,681)
Other provisions		176,675	178,027	179,175	177,823	48,902
Allowance for guarantees and acceptance		63,357	63,357	105,542	105,542	29,024
Allowance for advanced depreciation		(179,393)	(2,256)	-	(177,137)	(48,713)
Allowance for expensing depreciation		(1,923)	(232)	-	(1,691)	(465)
Deemed dividends		19,171	19,171	-	-	-
Net change in fair value of securities at FVOCI		7,233	7,233	21,341	21,341	5,869
Donation payables		39,429	39,429	78,750	78,750	21,656
Allowance and bad debt		463,135	463,135	162,884	162,884	45,903
Compensation expenses associated with stock option		437	359	100	178	49
Fictitious dividends		4,060	-	-	4,060	1,116
Others		195,341	318,316	271,361	148,386	35,161
		107,264	318,979	(989,877)	(1,201,592)	(334,553)
Expired unused tax losses						
Appropriation by extinctive prescription of deposit		1,281,039	25,262	-	1,255,777	345,339
Temporary differences not qualified for deferred tax assets or liabilities:						
Investments in associates and Subsidiaries (*2)		(470,668)	-	(214,788)	(685,456)	(188,500)
	₩	1, 858,971	344,241	(775,089)	739,641	199,286

(*1) Deferred tax assets of overseas subsidiaries have decreased by ₩29 million due to foreign currency exchange rate changes.
(*2) The effect of income taxes by the valuation of equity method was reasonably estimated based on the both plausibility and the applicable amount of deferred income tax belonging to each associate investee.

(In millions of won)

36. Income tax expense (continued)

(d) Changes in tax effects that were directly charged or credited to equity for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019		December 31, 2018		
		Amount before tax	Tax effects	Amount before tax	Tax effects	Changes in tax effects
Net change in fair value of securities at FVOCI	₩	136,322	(26,589)	(21,341)	223	(26,812)
Share of other comprehensive income (loss) of associates		8,281	(117)	4,923	(64)	(53)
Foreign currency translation differences for foreign operations		(206,083)	(9,697)	(296,622)	(16,381)	6,684
Remeasurements of defined benefit plans		(421,030)	115,882	(382,774)	105,339	10,543
Other (stock option)		1,088	(295)	6,690	(1,836)	1,541
	₩	(481,422)	79,184	(689,124)	87,281	(8,097)

		December 31, 2018		December 31, 2017		
		Amount before tax	Tax effects	Amount before tax	Tax effects	Changes in tax effects
Net change in fair value of available-for-sale financial assets	₩	(21,341)	223	(185,414)	60,874	(60,651)
Share of other comprehensive income (loss) of associates		4,923	(64)	6,749	(163)	99
Foreign currency translation differences for foreign operations		(296,622)	(16,381)	(311,258)	(25,905)	9,524
Remeasurements of defined benefit plans		(382,774)	105,339	(285,698)	78,662	26,677
Other (stock option)		6,690	(1,836)	2,899	(3,757)	1,921
	₩	(689,124)	87,281	(772,722)	109,711	(22,430)

(e) The current tax assets and liabilities as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Current tax assets:			
Prepaid income taxes	₩	31,312	43,026
Current tax liabilities:			
Payable due to consolidated tax system	₩	353,674	265,789
Income taxes payables		44,955	53,639
	₩	398,629	319,428

(In millions of won, except for earnings per share)

36. Income tax expense (continued)

(f) The deferred tax assets (liabilities) and current tax assets (liabilities) presented on a gross basis prior to any offsetting as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Deferred tax assets	₩	1,904,536	1,713,266
Deferred tax liabilities		1,691,501	1,513,980
Current tax assets		400,753	236,015
Current tax liabilities		768,070	512,418

37. Earnings per share

(a) Earnings per share for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Profit for the year	₩	2,329,192	2,279,049
Less: dividends on hybrid bonds		(33,115)	(25,228)
Profit available for common stock	₩	2,296,077	2,253,821
Weighted average number of common shares outstanding		1,585,615,506 shares	1,585,615,506 shares
Basic and diluted earnings per share in won	₩	1,448	1,421

Considering that the Group had no dilutive potential common shares and that stock options were not included in the calculation of diluted earnings per share because they were anti-dilutive for the reporting periods presented, diluted earnings per share equal to basic earnings per share for the years ended December 31, 2019 and 2018.

(b) Weighted average number of common shares outstanding as of December 31, 2019 and 2018 were as follows:

	2019	2018
Number of common shares outstanding	1,585,615,506 shares	1,585,615,506 shares
Weight	365/365	365/365
Weighted average number of common shares outstanding	1,585,615,506 shares	1,585,615,506 shares

(In millions of won)

38. Commitments and contingencies

(a) Guarantees, acceptances and credit commitments as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Guarantees:			
Guarantee outstanding	₩	9,298,134	9,415,888
Contingent guarantees		3,579,892	3,984,667
		12,878,026	13,400,555
Commitments to extend credit:			
Loan commitments in Korean won		72,114,261	69,126,234
Loan commitments in foreign currencies		22,470,583	19,967,126
ABS and ABCP purchase commitments		2,003,354	2,083,522
Others		2,574,184	1,907,432
		99,162,382	93,084,314
Endorsed bills:			
Secured endorsed bills		11,287	37,667
Unsecured endorsed bills		6,737,097	7,758,242
		6,748,384	7,795,909
Loans sold with repurchase agreement		2,099	2,099
	₩	118,790,891	114,282,877

(b) Provision for acceptances and guarantees

Allowance for acceptances and guarantees, as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Guarantees outstanding	₩	9,298,134	9,415,888
Contingent guarantees		3,579,892	3,984,667
ABS and ABCP purchase commitments		2,003,354	2,083,522
Secured endorsed bills		11,287	37,667
	₩	14,892,667	15,521,744
Allowance for acceptances and guarantees	₩	91,083	105,543
Ratio (%)		0.61	0.68

(In millions of won)

38. Commitments and contingencies (continued)

(c) Legal contingencies

Pending litigations in which the Group was involved as a defendant as of December 31, 2019 were as follows:

Case	Number of claim		Claim amount	Description	Status
Damage claim	1	₩	6,893	The plaintiff filed a lawsuit against the Bank, which is a consignee according to the asset custody contract, for the damages caused by a fire in the property taken custody by the Bank.	In 2015 and 2017, the plaintiffs prevailed, but the first and second decisions were different and in progress of third order.
Deposit return	1		4,606	The plaintiff claimed that the Bank has cancelled the money deposited in his account without his consent, and requested the Bank to pay back the amount equivalent to the deposit.	Since 2017, the Bank won the first and second trial and the third trial was ongoing as of December 31, 2019.
Indemnification cost	1		4,112	The plaintiff, an insurance company, filed a lawsuit against the Bank, which is a consignee according to the asset custody contract, for the insurance money paid for the damages caused by a fire in the property taken custody by the Bank.	In 2017, the Bank has lost on the first order and in progress for second order.
Others	114		53,027	It includes various cases, such as compensation for loss claim.	
	117	₩	68,638		

As of December 31, 2019, the Group recorded a provision of ₩5,895 million for litigation for certain of the above lawsuits. Additional losses may be incurred from these legal actions besides the current provision established by the Group, but the amount of loss is not expected to have a material adverse effect on the Group's consolidated financial statements.

(d) Others

On December 19, 2019, the Group received the Financial Dispute Resolution Committee's decision regarding certain currency option contracts, which will be processed in accordance with the Board of Director's resolution. The Group's management believes that the result of the resolution will not have a material impact on the Group's financial position. In addition, the Korean supervisory authorities is conducting inspections on certain private equity funds managed by Lime Asset Management and sold by the Group for alleged mis-selling activities. Depending on the results of the inspections, proceedings for dispute settlement and loss compensation on the mis-selling, if any, may take place. As of December 31, 2019, the amount of funds sold by the Group for which Lime Asset Management has delayed repurchase amounted to ₩276.9 billion. The Group has not recognized any provision because whether a mis-selling has happened or the potential amount of compensation claimed against the Group cannot be estimated reliably.

(In millions of won)

39. Statements of cash flows

(a) Cash and cash equivalents reported in the accompanying consolidated statements of cash flows as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Cash	₩	2,528,135	2,568,913
Reserve deposits		13,555,978	2,094,612
Other deposits		7,965,719	8,486,752
Cash and due from banks		24,049,832	13,150,277
Less: Restricted due from banks		(14,725,735)	(3,888,144)
Less: Due with original maturities of more than three months		(2,213,580)	(2,557,180)
	₩	7,110,517	6,704,953

(b) Significant non-cash activities for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Dividend payable of hybrid bonds	₩	-	2,597
Debt-equity swap		224,093	28,759
Accounts payable for purchase of property and equipment		-	897
Accounts payable for purchase of intangible assets		424,039	1,047
Recognition of right-of-use assets		712,228	-
Recognition of lease liabilities		665,146	-

(c) Changes in liabilities resulting from financing activities for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019		
		Borrowings	Debt securities issued	Total
Beginning balance	₩	16,154,821	31,899,266	48,054,087
Changes in cash flows		943,540	5,649,894	6,593,434
Amortization		848	(47,968)	(47,120)
Net foreign currencies transaction gain		226,675	215,766	442,441
Changes in fair value of hedged items		-	312,910	312,910
Ending balance	₩	17,325,884	38,029,868	55,355,752

		December 31, 2018		
		Borrowings	Debt securities issued	Total
Beginning balance	₩	14,617,562	25,460,427	40,077,989
Changes in cash flows		1,094,960	6,447,699	7,542,659
Amortization		(1,722)	(76,675)	(78,397)
Net foreign currencies transaction gain		444,021	30,211	474,232
Changes in fair value of hedged items		-	37,604	37,604
Ending balance	₩	16,154,821	31,899,266	48,054,087

(In millions of won)

40. Related party transactions

(a) Significant balances with the related parties as of December 31, 2019 and 2018 were as follows:

Related party	Account		December 31, 2019	December 31, 2018
The parent company				
Shinhan Financial Group	Other assets	₩	59	-
	Deposits		167	24
	Other liabilities		406,269	309,355
Entities under common control				
Shinhan Card Co., Ltd.	Derivative assets		12,066	5,100
	Loans		103,018	33,732
	Allowance for loan loss		(629)	(202)
	Other assets (*1)		13,575	1,338
	Deposits		35,260	23,522
	Derivative liabilities		516	269
	Provisions		63	180
	Other liabilities		31,891	22,702
Shinhan Investment Corp.	Cash and due from banks		6,202	6,281
	Derivative assets		11,814	13,095
	Loans		5	22,917
	Allowance for loan loss		(5)	(151)
	Other assets (*1)		19,473	19,972
	Deposits		565,972	202,561
	Borrowings		11,100	11,100
	Derivative liabilities		6,749	1,981
	Provisions		532	67
	Other liabilities		42,312	40,338
Shinhan Life Insurance	Derivative assets		20,542	17,302
	Other assets		9	3
	Deposits		14,724	14,335
	Derivative liabilities		12,771	7,771
	Provisions		5	16
	Other liabilities		11,940	14,674
Shinhan Capital Co., Ltd.	Deposits		904	1,504
	Borrowings		1,000	12,000
	Provisions		26	14
	Other liabilities		13,575	13,611
Jeju Bank	Loans		4,573	1,621
	Allowance for loan loss		(3)	(2)
	Other assets		2	1
	Deposits		1,881	11,045
	Other liabilities		2,139	2,446
Shinhan Credit Information Co., Ltd.	Deposits		4,842	3,793
	Other liabilities		2,195	1,599
Shinhan Alternative Investment Management, Inc.	Deposits		8,288	5,405
	Other liabilities		9	23

(In millions of won)

40. Related party transactions (continued)

(a) Significant balances with the related parties as of December 31, 2019 and 2018 were as follows: (continued)

Related party	Account		December 31, 2019	December 31, 2018
Entities under common control (continued)				
Shinhan BNP Paribas AMC	Deposits	₩	57,986	121,976
	Other liabilities		642	1,673
Shinhan DS	Loans		8	2
	Other assets		1,443	-
	Deposits		4,961	815
	Other liabilities		9,069	6,567
Shinhan Savings Bank	Other liabilities		8,987	8,987
Shinhan Aitas	Deposits		24,079	14,604
	Other liabilities		20	60
Shinhan AI Co., Ltd.	Deposits		1	-
	Other liabilities		1,929	-
Shinhan REITs Management	Deposits		-	79
Orange Life Insurance Co., Ltd.	Deposits		2,402	-
	Derivative liabilities		446	-
Investments in associates and entities under common control				
BNP Paribas Cardif Life Insurance Co., Ltd.	Deposits		402	444
BNP Paribas Cardif General Insurance	Deposits		17	157
Dream High Fund III	Deposits		5	4
Midas Dong-A Snowball Venture Fund	Deposits		-	159
Partners 4th Growth Investment Fund	Deposits		1,443	1,855
Credian Health Care Private Equity Fund II	Deposits		4	45
Snowball Venture Fund II	Deposits		233	354
IBKS-Shinhan Creative Economy New Technology Fund II	Deposits		-	672
YIUM The 3rd Private Investment Joint Stock Company	Deposits		353	49
Taihan Industrial System Co., Ltd. (*2)	Provisions		-	85
ICSF (The Korea's Information Center for Savings & Finance)	Deposits		6	4

(In millions of won)

40. Related party transactions (continued)

(a) Significant balances with the related parties as of December 31, 2019 and 2018 were as follows: (continued)

Related party	Account	December 31, 2019	December 31, 2018
Investments in associates and entities under common control (continued)			
Multimedia Tech Co., Ltd.	Deposits	3	-
KOREA FINANCE SECURITY	Deposits	362	-
Hermes Private Investment Equity Fund	Deposits	275	-
Korea Credit Bureau	Deposits	80	-
Goduck Gangil1 PFV Co., Ltd.	Loans	24,000	-
	Allowance for loan loss	(78)	-
SBC PFV Co., Ltd.	Deposits	5,142	-
GMG Development Co., Ltd.	Deposits	300	-
Sprott Global Renewable Private Equity Fund I	Deposits	342	-
IMM Global Private Equity Fund	Loans	800	-
IMM Global Private Equity Fund	Allowance for loan loss	(3)	-
	Deposits	7,598	-
Key management personnel			
	Loans	4,426	2,783
	Allowance for loan loss	(3)	(1)
	Provisions	1	1

(*1) Included right-of-use assets of leases.
(*2) This investee was excluded from associates during the year ended December, 2019, since the Group had no significant influence over it.

(b) Significant transactions with the related parties for the years ended December 31, 2019 and 2018 were as follows:

Related party	Account		2019	2018
The parent company				
Shinhan Financial Group	Other income	₩	1,259	1,392
	Interest expense		(258)	(268)
	Fees and commission expense		(32,300)	(31,608)
Entities under common control				
Shinhan Card Co., Ltd.	Interest income		4,621	3,302
	Fees and commission income		182,787	198,589
	Gain related to derivatives		15,598	8,975
	Other income		1,841	1,815
	Interest expense		(701)	(256)
	Fees and commission expense		(441)	(180)
	Loss related to derivatives		(4,066)	(371)
	Reversal of (provision for) allowance		(427)	164
	Other expense		(2,584)	(3,561)

(In millions of won)

40. Related party transactions (continued)

(b) Significant transactions with the related parties for the years ended December 31, 2019 and 2018 were as follows: (continued)

Related party	Account	2019	2018
Entities under common control (continued)			
Shinhan Investment Corp.	Interest income	1,612	950
	Fees and commission income	5,984	7,362
	Gain related to derivatives	38,807	45,592
	Other income	2,621	4,484
	Interest expense	(2,234)	(2,247)
	Loss related to derivatives	(34,770)	(14,150)
	Reversal of (provision for) allowance	146	(149)
	Other expense	(157)	(286)
Shinhan Life Insurance	Interest income	49	49
	Fees and commission income	10,295	11,286
	Gain related to derivatives	62,337	51,311
	Other income	650	695
	Interest expense	(244)	(278)
	Fees and commission expense	(269)	-
	Loss related to derivatives	(11,301)	(8,272)
	Other expense	(399)	(641)
Shinhan Capital Co., Ltd.	Interest income	1	-
	Other income	320	972
	Interest expense	(765)	(852)
	Other expense	(12)	-
Jeju Bank	Interest income	6	25
	Other income	227	52
	Interest expense	(41)	(79)
	provision for allowance	(3)	(1)
Shinhan Credit Information Co., Ltd.	Fees and commission income	4	3
	Other income	53	83
	Interest expense	(77)	(84)
	Fees and commission expense	(6,332)	(5,095)
Shinhan Alternative Investment Management, Inc.	Interest expense	(74)	(37)
Shinhan BNP Paribas AMC	Fees and commission income	38	44
	Other income	68	9
	Interest expense	(1,220)	(2,157)
	Fees and commission expense	(2,099)	(2,158)
Shinhan DS	Other income	201	175
	Interest expense	(199)	(146)
	Other expense	(44,548)	(41,096)
Shinhan Savings Bank	Fees and commission income	966	869
	Other income	215	205
	Interest expense	(163)	(152)

(In millions of won)

40. Related party transactions (continued)

(b) Significant transactions with the related parties for the years ended December 31, 2019 and 2018 were as follows: (continued)

Related party	Account	2019	2018
Entities under common control (continued)			
Shinhan Aitas	Fees and commission income	45	40
	Other income	56	6
	Interest expense	(36)	(70)
	Fees and commission expense	(29)	-
Shinhan REITs Management	Interest expense	-	(132)
Shinhan AI Co., Ltd.	Other income	5,953	-
	Fees and commission expense	(1,929)	-
Orange Life Insurance Co., Ltd.	Fees and commission income	1,576	-
	Gain related to derivatives	604	-
	Interest expense	(37)	-
	Loss related to derivatives	(446)	-
Asia Trust Co., Ltd.	Other income	14	-
Investments in associates and entities under common control			
BNP Paribas Cardif Life Insurance Co., Ltd.	Fees and commission income	3,028	2,496
	Other expense	(1)	-
BNP Paribas Cardif General Insurance	Fees and commission income	9	5
Midas Dong-A Snowball Venture Fund	Interest expense	(1)	(2)
Partners 4th Growth Investment Fund	Interest expense	(7)	(19)
JAEYOUNG SOLUTECH Co., Ltd. (*1)	Interest income	-	347
	Fees and commission income	-	1
	Other income	-	3
	provision for allowance	-	(2)
	Interest expense	-	(1)
Snowball Venture Fund II	Interest expense	-	(2)
Taihan Industrial System(*2)	Fees and commission income	-	1
Hyungje Art Printing	Interest income	-	13
	Fees and commission income	-	1
KOREA FINANCE SECURITY	Fees and commission income	10	-
WON JIN HOME PLAN Co., Ltd.	Interest income	186	-
Korea Credit Bureau	Fees and commission income	13	-
	Interest expense	(5)	-

(In millions of won)

40. Related party transactions (continued)

(b) Significant transactions with the related parties for the years ended December 31, 2019 and 2018 were as follows: (continued)

Related party	Account	2019	2018
Investments in associates and entities under common control			
Goduck Gangil1 PFV Co., Ltd.	Interest income	328	-
	Fees and commission income	1,120	-
	provision for allowance	(78)	-
SBC PFV Co., Ltd.	Interest expense	(3)	-
IMM Global Private Equity Fund	Interest income	28	-
	Interest expense	(25)	-
	provision for allowance	(3)	-
Key management personnel			
	Interest income	161	94

(*1) These investee was sold and excluded from associates during the year ended December 31, 2019.
(*2) This investee was excluded from associates during the year ended December, 2019, since the Group had no significant influence over it.

(c) Details of transactions with key management for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Short and long term employee benefits	₩	10,506	14,175
Post-employment benefits		355	305
Share-based payment transactions		5,167	2,393
	₩	16,028	16,873

(d) The guarantees provided between the related parties as of December 31, 2019 and 2018 were as follows:

Guaranteed parties		Amount of guarantees December 31, 2019	Amount of guarantees December 31, 2018	Account
Shinhan Investment Corp.	₩	258,901	226,143	Unused credit
Shinhan Card Co., Ltd.		575,912	504,832	Unused credit
		14,473	-	Financial guarantees
Shinhan Life Insurance		50,000	50,000	Unused credit
Shinhan Capital Co., Ltd.		70,000	70,000	Unused credit
BNP Paribas Cardif Life Insurance Co., Ltd.		10,000	10,000	Unused credit
Shinhan Alternative Investment Management Inc.		37,925	3,600	Security underwriting commitment
Shinhan DS		7	13	Unused credit
	₩	1,017,218	864,588	

(In millions of won)

40. Related party transactions (continued)

(e) Collaterals provided by related parties

i) Details of collaterals provided to the related parties as of December 31, 2019 and 2018 were as follows:

				December 31, 2019		December 31, 2018	
	Related party	Pledged assets		Carrying amounts	Amounts collateralized	Carrying amounts	Amounts collateralized
Entities under common control	Shinhan Life Insurance	Securities		10,189	10,189	10,230	10,230
	Orange Life Insurance	Securities		10,243	516	-	-
			₩	20,432	10,705	10,230	10,230

ii) Details of collaterals provided by the related parties as of December 31, 2019 and 2018 were as follows:

	Related party	Pledged assets		December 31, 2019	December 31, 2018
Entities under common control	Shinhan Investment Corp.	Deposits	₩	135,700	135,700
		Real estate		91,974	91,974
	Jeju Bank	Government bonds		20,000	20,000
	Shinhan Life Insurance	Government bonds		6,000	6,000
	Shinhan Credit Information Co., Ltd.	Deposits		180	180
Investments in associates	BNP Paribas Cardif Life Insurance Co., Ltd.	Government bonds		12,000	12,000
	Hyungje art printing	Machine equipment		120	-
	Goduck Gangil1 PFV Co., Ltd.	Trust		28,800	-
			₩	294,774	265,854

(f) Transaction with related parties

i) Details of significant lease and collection of related parties as of December 31, 2019 and 2018 were as follows

			2019			
	Related party		Beginning balance (*1)	Rental	Recovery	Ending balance (*1)
Entities under common control	Shinhan Financial Investment	₩	22,917	26,311	(49,223)	5
	Shinhan Card Co., Ltd.		33,732	86,410	(17,124)	103,018
	Jeju Bank		1,621	9,189	(6,237)	4,573
	Shinhan DS		2	9	(3)	8
Investments in associates and entities under common control	Goduck Gangil1 PFV Co., Ltd.		-	24,000	-	24,000
	IMM Global Private Equity Fund		-	800	-	800
			58,272	146,719	(72,587)	132,404

(*1) The amount is before deducting allowance for bad debts.

(In millions of won)

40. Related party transactions (continued)

(f) Transaction with related parties (continued)

i) Details of significant lease and collection of related parties as of December 31, 2019 and 2018 were as follows: (continued)

		2018			
	Related party	Beginning balance (*1)	Rental	Recovery	Ending balance (*1)
Entities under common control	Shinhan Investment Corp.	14,987	39,315	(31,385)	22,917
	Shinhan Card Co., Ltd.	39,529	16,932	(22,729)	33,732
	Jeju Bank	2,658	14,494	(15,531)	1,621
	Shinhan DS	-	2	-	2
		57,174	70,743	(69,645)	58,272

(*1) The amount is before deducting allowance for bad debts.

ii) Details of significant redemption of borrowings of related parties as of December 31, 2019 and 2018 were as follows:

			2019			
	Related party	Account	Beginning balance	Borrowing	Redemption	Ending balance
Entities under common control	Shinhan Investment Corp.	Borrowing	₩ 11,100	-	-	11,100
	Shinhan Capital Co., Ltd.	Borrowing	12,000	-	(11,000)	1,000
	Shinhan Investment Corp.	Deposit (*1)	42,000	-	-	42,000
	Shinhan Credit Information Co., Ltd.	Deposit (*1)	2,390	-	-	2,390
	Shinhan Card Co., Ltd.	Deposit (*1)	50	-	(45)	5
	Shinhan Alternative Investment Management Inc.	Deposit (*1)	4,600	1,000	(3,800)	1,800
	Shinhan BNP Paribas AMC	Deposit (*1)	104,500	15,100	(76,500)	43,100
	Shinhan Aitas	Deposit (*1)	4,000	10,000	(4,000)	10,000
	Shinhan DS	Deposit (*1)	513	-	(513)	-
Investments in associates and entities under common control	Midas Dong-A Snowball Venture Fund	Deposit (*1)	158	-	(158)	-
			₩ 181,311	26,100	(96,016)	111,395

(*1) Details of settlements among related parties, such as depository liabilities that can be deposited and withdrawn on demand, were excluded.

(In millions of won)

40. Related party transactions (continued)

(f) Transaction with related parties (continued)

ii) Details of significant redemption of borrowings of related parties as of December 31, 2019 and 2018 were as follows: (continued)

			2018			
	Related party	Account	Beginning balance	Borrowing	Redemption	Ending balance
Entities under common control	Shinhan Investment Corp.	Borrowing	₩ 15,000	-	(3,900)	11,100
	Shinhan Capital Co., Ltd.	Borrowing	13,000	-	(1,000)	12,000
	Shinhan Investment Corp.	Deposit (*1)	42,000	-	-	42,000
	Shinhan Credit Information Co., Ltd.	Deposit (*1)	4,390	-	(2,000)	2,390
	Shinhan Card Co., Ltd.	Deposit (*1)	50	-	-	50
	Shinhan Alternative Investment Management Inc.	Deposit (*1)	-	4,600	-	4,600
	Shinhan BNP Paribas AMC	Deposit (*1)	101,600	16,500	(13,600)	104,500
	Shinhan Aitas	Deposit (*1)	3,000	1,000	-	4,000
	Shinhan DS	Deposit (*1)	4,478	-	(3,965)	513
	Shinhan REITs Management	Deposit (*1)	-	19,000	(19,000)	-
Investments in associates and entities under common control	Midas Dong-A Snowball Venture Fund	Deposit (*1)	220	15	(77)	158
			₩ 183,738	41,115	(43,542)	181,311

(*1) Details of settlements among related parties, such as depository liabilities that can be deposited and withdrawn on demand, were excluded.

(g) Transaction of business transfer under common control

As of November 27, 2018, Shinhan Asia Limited transferred assets of ₩727,206 million and liabilities of ₩727,194 million to Shinhan Bank, Hong Kong branch. This is a transaction of business transfer under common control, and the Bank accounted for the transfer as book value.

(In millions of won)

41. Summary of subsidiaries' financial statements

(a) Condensed statements of financial positions for the Bank and its subsidiaries as of December 31, 2019 and 2018 were as follows:

	2019			2018		
	Total assets	Total liabilities	Total equity	Total assets	Total liabilities	Total equity
Shinhan Bank	₩ 364,744,341	339,669,735	25,074,606	323,875,533	300,304,150	23,571,383
Shinhan America	1,896,516	1,659,844	236,672	1,584,978	1,358,153	226,825
Shinhan Canada	730,808	655,879	74,929	607,970	541,887	66,083
Shinhan Europe	637,943	555,205	82,738	604,022	522,862	81,160
Shinhan China	5,451,603	4,987,520	464,083	5,448,655	5,031,704	416,951
Shinhan Asia (*1)	118,907	-	118,907	115,360	-	115,360
Shinhan Kazakhstan	162,564	119,381	43,183	122,927	83,431	39,496
Shinhan Cambodia	520,994	393,170	127,824	282,807	167,372	115,435
Shinhan Japan	9,430,155	8,747,927	682,228	7,704,586	7,126,117	578,469
Shinhan Vietnam (*2)	5,257,696	4,411,350	846,346	4,101,845	3,489,835	612,010
Shinhan Mexico	198,402	106,747	91,655	118,821	35,253	83,568
Shinhan Indonesia (*2)	1,339,525	965,242	374,283	971,954	613,185	358,769
Structured entities	8,764,132	8,771,900	(7,768)	8,111,107	8,108,193	2,914

(*1) The liquidation process was in progress as of December 31, 2019.
(*2) Fair value adjustment at the time of business combination was applied.

(In millions of won)

41. Summary of subsidiaries' financial statements (continued)

(b) Condensed statements of comprehensive income for the Bank and its subsidiaries for the years ended December 31, 2019 and 2018 were as follows:

	2019			2018		
	Operating income	Profit (loss) for the year	Total comprehensive income (loss)	Operating income	Profit (loss) for the year	Total comprehensive income (loss)
Shinhan Bank	₩ 21,909,875	2,071,235	2,130,313	18,611,228	2,116,606	2,179,652
Shinhan America	82,560	1,020	9,848	69,149	(2,547)	4,046
Shinhan Canada	29,502	3,480	8,846	23,027	2,760	174
Shinhan Europe	17,123	421	1,578	14,243	14	8
Shinhan China	226,877	35,250	47,132	284,885	31,764	47,129
Shinhan Asia (*1)	-	(548)	3,548	39,666	20,319	30,886
Shinhan Kazakhstan	11,093	2,073	3,688	10,815	1,929	(2,356)
Shinhan Cambodia	27,466	8,345	12,389	17,492	8,102	12,777
Shinhan Japan	221,414	75,392	103,759	187,806	64,929	95,418
Shinhan Vietnam (*2)	380,267	124,336	175,380	292,539	94,987	79,317
Shinhan Mexico	11,121	1,815	8,088	6,736	(116)	3,627
Shinhan Indonesia (*2)	84,319	(13,685)	15,512	64,006	10,640	(120)
Structured entities	260,398	(4,787)	(5,674)	241,466	(12,499)	(22,325)

(*1) The liquidation process was in progress as of December 31, 2019.
(*2) Fair value adjustment at the time of business combination was applied.

42. Interests in unconsolidated structured entities

(a) The nature and extent of interests in unconsolidated structured entities

The Group involved in assets-backed securitization, structured financing, beneficiary certificates and other structured entities and characteristics of these structured entities are as follows:

	Description
Assets-backed securitization	Securitization vehicles are established to buy assets from originators and issue asset-backed securities in order to facilitate the originators' funding activities and enhance their financial soundness. The Group is involved in the securitization vehicles by purchasing (or committing to purchase) the asset-backed securities issued and/or providing other forms of credit enhancement. The Group does not consolidate a securitization vehicle if (i) the Group is unable to make or approve decisions as to the modification of the terms and conditions of the securities issued by such vehicle or disposal of such vehicles' assets, (ii) (even if the Group is able to do so) if the Group does not have the exclusive or primary power to do so, or (iii) if the Group does not have exposure, or right, to a significant amount of variable returns from such entity due to the purchase (or commitment to purchase) of asset-backed securities issued or subordinated obligations or by providing other forms of credit support.
Structured financing	Structured entities for project financing are established to raise funds and invest in a specific project such as M&A (Mergers and Acquisitions), BTL (Build-Transfer-Lease), shipping finance, etc. The Group is involved in the structured entities by originating loans, investing in equity, or providing credit enhancement
Investment fund	Investment fund is a type of financial instrument where investment funds raise funds from the general public to invest in a group of assets such as stocks or bonds and distribute their income and capital gains to their investors. The Group is involved in investment fund by investing in various investment funds.

(In millions of won)

42. Interests in unconsolidated structured entities (continued)

(a) The nature and extent of interests in unconsolidated structured entities (continued)

i) The size of unconsolidated structured entities as of December 31, 2019 and 2018 were as follows:

		December 31, 2019			
		Assets-backed securitization	Structured financing	Investment fund	Total
Total assets	₩	81,014,871	110,511,866	86,166,205	277,692,942

		December 31, 2018			
		Assets-backed securitization	Structured financing	Investment fund	Total
Total assets	₩	87,030,471	71,518,755	32,031,029	190,580,255

ii) The carrying amounts of the assets and liabilities recognized relating to its interests in unconsolidated structured entities as of December 31, 2019 and 2018 were as follows:

		December 31, 2019			
		Assets-backed securitization	Structured financing	Investment fund	Total
Assets:					
Loans at amortized cost	₩	196,522	5,695,134	79,287	5,970,943
Securities at FVPL		3,400,040	17,016	3,095,708	6,512,764
Derivative assets		21,494	1,028	-	22,522
Securities at FVOCI		1,711,025	186,562	-	1,897,587
Securities at amortized cost		3,106,869	-	-	3,106,869
Others		-	10,050	57,935	67,985
	₩	8,435,950	5,909,790	3,232,930	17,578,670

		December 31, 2018			
		Assets-backed securitization	Structured financing	Investment fund	Total
Assets:					
Loans at amortized cost	₩	191,160	3,655,478	25,151	3,871,789
Securities at FVPL		3,720,323	178	2,601,732	6,322,233
Derivative assets		16,445	673	-	17,118
Securities at FVOCI		1,740,939	90,866	-	1,831,805
Securities at amortized cost		2,945,914	-	-	2,945,914
Others		-	-	56,001	56,001
	₩	8,614,781	3,747,195	2,682,884	15,044,860
Liabilities:					
Derivative liabilities	₩	306	-	-	306

(In millions of won)

42. Interests in unconsolidated structured entities (continued)

(b) Nature of risk associated with interests in unconsolidated structured entities (continued)

ii) Exposure to risk relating to interests in unconsolidated structured entities as of December 31, 2019 and 2018 were as follows:

	December 31, 2019				
		Assets-backed securitization	Structured financing	Investment fund	Total
Assets owned	₩	8,435,950	5,909,790	3,232,930	17,578,670
Purchase commitments		1,095,707	-	-	1,095,707
Providing unused credit		829,192	123,835	20,100	973,127
	₩	10,360,849	6,033,625	3,253,030	19,647,504

	December 31, 2018				
		Assets-backed securitization	Structured financing	Investment fund	Total
Assets owned	₩	8,614,780	3,747,194	2,682,884	15,044,858
Purchase commitments		1,282,874	-	-	1,282,874
Providing unused credit		2,328,748	123,948	26,100	2,478,796
Guarantees		-	142,032	-	142,032
	₩	12,226,402	4,013,174	2,708,984	18,948,560

(In millions of won)

43. Information of trust business

(a) Total assets with trust business as of December 31, 2019 and 2018 and operating revenue for the years ended December 31, 2019 and 2018 were as follows:

		Total assets		Operating revenue	
		December 31, 2019	December 31, 2018	2019	2018
Consolidated	₩	4,602,965	4,521,280	150,825	128,577
Unconsolidated		88,524,148	71,639,988	1,584,508	996,465
	₩	93,127,113	76,161,268	1,735,333	1,125,042

(b) Significant balances with trust business as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Borrowings from trust accounts	₩	5,343,259	2,994,798
Deposits			
Accrued revenues from asset management fee		46,331	271,745
from trust accounts		34,796	34,286
Accrued interest expenses		1,342	1,325

(c) Significant transactions with trust business for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Asset management fee from trust accounts	₩	238,246	192,422
Termination fee		7,824	6,840
Interest on deposits		6,275	9,672
Interest on borrowings from trust accounts		60,834	45,154

(In millions of won)

44. Transition effects arising from changes in accounting policies

Upon adoption of K-IFRS No.1116, the Group recognized lease liabilities in relation to leases that had previously been classified as operating lease in accordance with K-IFRS No.1017. The lease liabilities are measured at the present value of the remaining lease payments discounted at the lessee's incremental borrowing rate of interest as of January 1, 2019. The weighted average lessee's borrowing rate of interest applied to the lease liability is 2.28%, as of January 1, 2019.

The difference between the amounts of operating lease contracts disclosed at December 31, 2018 discounted at the Group's incremental borrowing rate of interest and the lease liabilities recognized at the date of initial application is as follows:

		Amounts
Operating lease commitment disclosed as of December 31, 2018	₩	518,516
Amount discounted using the Group’s incremental borrowing rate of interest		504,660
Less: value-added tax		(43,318)
Lease liabilities recognized at the beginning of 2019	₩	461,342

Lease right-of-use assets were estimated by adjusting the amount of prepaid or unpaid lease payments in relation to leases, recognized in the consolidated statement of financial position at December 31, 2018, to the same amount of lease liability. As a result, the amount of right-of-use assets of ₩502,364 million was recognized as of January 1, 2019, and prepaid expense decreased by ₩34,213 million as of the same date. There is no net effect on retained earnings at the beginning of 2019.

SAMJONG

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Independent Auditors' Report

To the Board of Directors and Stockholder of
Shinhan Bank:

Opinion

We have audited the consolidated financial statements of Shinhan Bank and its subsidiaries ("the Group"), which comprise the consolidated statements of financial position as of December 31, 2018 and 2017, the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2018 and 2017, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing (KSAs). Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Matter

The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with K-IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with KSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with KSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used in the preparation of the consolidated financial statements and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

KPMG Samjong Accounting Corp.

KPMG Samjong Accounting Corp.
Seoul, Korea
March 11, 2019

This report is effective as of March 11, 2019, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

SHINHAN BANK AND SUBSIDIARIES

Consolidated Statements of Financial Position

As of December 31, 2018 and 2017

(In millions of won)	Notes		December 31, 2018 (*1)	December 31, 2017 (*1)
Assets				
Cash and due from banks	4,7,10,40,41	₩	13,150,277	18,662,322
Securities at fair value through profit or loss			15,612,433	-
Trading assets	4,8,41,43		-	11,216,398
Derivative assets	4,9,41,43		1,484,458	2,604,090
Loans at amortized cost	4,10,18,41,43		251,233,806	-
Loans at fair value through profit or loss	4,10		645,237	-
Loans	4,10,18,41,43		-	231,732,156
Securities at fair value through other comprehensive income			31,878,348	-
Available-for-sale financial assets	4,11,18,43		-	32,495,541
Securities at amortized cost	4,11,18,43		16,824,400	-
Held-to-maturity financial assets	4,11,18,43		-	14,822,898
Property and equipment	6,12,17,18		2,014,412	2,055,875
Intangible assets	6,13		316,229	299,579
Investments in associates	14		109,742	100,336
Investment properties	6,15		571,293	598,296
Defined benefit assets	24		-	34,120
Current tax assets	37		43,026	24,674
Deferred tax assets	37		222,766	407,344
Other assets	4,10,16,41,43		14,409,627	9,253,079
Non-current assets held for sale	17		7,561	7,534
Total assets		₩	348,523,615	324,314,242
Liabilities				
Deposits	4,20,41	₩	257,892,724	242,653,744
Financial liabilities at fair value through profit or loss	4,21		479,559	-
Trading liabilities	4,21		-	434,586
Derivative liabilities	4,9,41,43		1,771,585	2,992,936
Borrowings	4,22,40,41		16,154,821	14,617,562
Debt securities issued	4,23,40		31,899,266	25,460,427
Defined benefit liabilities	24		70,649	3,805
Provisions	25,39,41		284,716	259,323
Current tax liabilities	37		319,428	210,944
Deferred tax liabilities	37		23,480	11,994
Other liabilities	4,26,41,44		15,434,848	15,014,977
Total liabilities			324,331,076	301,660,298
Equity				
Capital stock	27		7,928,078	7,928,078
Hybrid bonds	27		698,660	668,938
Capital surplus	27		403,164	403,164
Capital adjustments	27,37		646	(3,307)
Accumulated other comprehensive loss	27,37		(606,697)	(490,772)
Retained earnings	27,28		15,762,751	14,142,545
Total equity attributable to equity holder of Shinhan Bank			24,186,602	22,648,646
Non-controlling interests	27		5,937	5,298
Total equity			24,192,539	22,653,944
Total liabilities and equity		₩	348,523,615	324,314,242

(*1) The consolidated statement of financial position as of December 31, 2018 was prepared in accordance with K-IFRS No.1109 and K-IFRS No.1115. However, the comparative consolidated statement of financial position as of December 31, 2017 was not retrospectively restated.

See accompanying notes to the consolidated financial statements.

SHINHAN BANK AND SUBSIDIARIES

Consolidated Statements of Comprehensive Income

For the years ended December 31, 2018 and 2017

(In millions of won)	**Notes**		**2018** (*1)	**2017** (*1)
Interest income		₩	9,596,725	8,123,401
Financial assets at fair value through profit or loss			234,031	-
Trading assets			-	181,654
Financial assets at fair value through other comprehensive income and amortized cost			9,362,694	-
Loans and receivables and investment securities			-	7,941,747
Interest expense			(4,010,731)	(3,131,350)
Net interest income	4,6,29,41,43		5,585,994	4,992,051
Fees and commission income			1,257,752	1,183,874
Fees and commission expense			(221,219)	(192,799)
Net fees and commission income	4,6,30,41,43		1,036,533	991,075
Dividend income	31,43		15,662	100,516
Net gain on financial assets at fair value through profit or loss			358,511	-
Net trading loss	32		-	(164,898)
Net foreign currencies transaction gain	32		141,745	472,576
Net loss on financial instruments designated at fair value through profit or loss	19		-	(43)
Net gain on disposal of financial asset at fair value through other comprehensive income	11		16,387	-
Net gain on sale of available-for-sale financial assets	11		-	195,845
Provision for credit loss allowance			(243,139)	-
Impairment loss on financial assets	4,10,41		-	(660,561)
General and administrative expenses	33,41		(3,061,786)	(3,118,058)
Net other operating expenses	6,35,41		(685,221)	(602,789)
Operating income			3,164,686	2,205,714
Net non-operating expenses	6,36		(17,305)	(47,922)
Share of profit (loss) of associates	6,14		(977)	1,306
Profit before income tax	6		3,146,404	2,159,098
Income tax expense	6,37		(867,042)	(446,784)
Profit for the year	6,27		2,279,362	1,712,314

SHINHAN BANK AND SUBSIDIARIES

Consolidated Statements of Comprehensive Income (Continued)

For the years ended December 31, 2018 and 2017

(In millions of won, except for earnings per share)	**Notes**		**2018** (*1)	**2017** (*1)
Other comprehensive income (loss) for the year:	4,27,37			
Items that are or may be reclassified subsequently to profit or loss				
Foreign currency translation differences for foreign operations			21,299	(186,232)
Unrealized net change in fair value of financial assets at fair value through other comprehensive income			87,074	-
Unrealized net change in fair value of available-for-sale financial assets			-	(92,969)
Share of other comprehensive loss of associates			(1,754)	(10,563)
			106,619	(289,764)
Items that will not be reclassified subsequently to profit or loss				
Remeasurements of defined benefit plans			(70,399)	73,879
Unrealized net change in fair value of financial assets at fair value through other comprehensive income			17,670	-
Share of other comprehensive income of associates			14	152
			(52,715)	74,031
Other comprehensive income (loss) for the year, net of income tax			53,904	(215,733)
Total comprehensive income for the year		₩	2,333,266	1,496,581
Profit attributable to:	6			
Equity holder of Shinhan Bank		₩	2,279,049	1,712,073
Non-controlling interests			313	241
Profit for the year		₩	2,279,362	1,712,314
Total comprehensive income (loss) attributable to:				
Equity holder of Shinhan Bank		₩	2,332,943	1,497,332
Non-controlling interests			323	(751)
Total comprehensive income for the year		₩	2,333,266	1,496,581
Earnings per share:	38			
Basic and diluted earnings per share in won		₩	1,421	1,061

(*1) The consolidated statement of comprehensive income for the year ended December 31, 2018 was prepared in accordance with K-IFRS No.1109 and K-IFRS No.1115. However, the comparative consolidated statement of comprehensive income for the year ended December 31, 2017 was not retrospectively restated.

See accompanying notes to the consolidated financial statements.

SHINHAN BANK AND SUBSIDIARIES

Consolidated Statements of Changes in Equity

For the year ended December 31, 2017

(In millions of won)		Attributable to equity holder of Shinhan Bank								
		Capital stock	**Hybrid bonds**	**Capital surplus**	**Capital adjustments**	**Accumulated other comprehensive income (loss)**	**Retained earnings**	**Sub-total**	**Non-controlling interests**	**Total (*1)**
Balance at January 1, 2017	₩	7,928,078	469,393	403,164	(64,615)	(276,445)	13,000,837	21,460,412	6,561	21,466,973
Total comprehensive income (loss), net of income tax										
Profit for the year		-	-	-	-	-	1,712,073	1,712,073	241	1,712,314
Foreign currency translation differences for foreign operations		-	-	-	-	(185,227)	-	(185,227)	(1,005)	(186,232)
Unrealized net changes in fair values of available-for-sale financial assets		-	-	-	-	(92,983)	-	(92,983)	14	(92,969)
Share of other comprehensive loss of associates		-	-	-	-	(9,997)	(414)	(10,411)	-	(10,411)
Remeasurements of defined benefit plans		-	-	-	-	73,880	-	73,880	(1)	73,879
Total comprehensive income (loss) for the year		-	-	-	-	(214,327)	1,711,659	1,497,332	(751)	1,496,582
Transactions with owners, recognized directly in equity										
Annual dividends to equity holder		-	-	-	-	-	(480,000)	(480,000)	-	(480,000)
Dividends to hybrid bond holders		-	-	-	-	-	(29,857)	(29,857)	-	(29,857)
Redemption of hybrid bonds		-	199,545	-	-	-	-	199,545	-	199,545
Share-based payment transactions		-	-	-	1,213	-	-	1,213	-	1,213
Capital investment in subsidiaries		-	-	-	1	-	-	-	(512)	(511)
Disposal of other capital adjustments		-	-	-	60,094	-	(60,094)	-	-	-
Total transactions with owners		-	199,545	-	61,308	-	(569,951)	(309,099)	(512)	(309,610)
Balance at December 31, 2017	₩	7,928,078	668,938	403,164	(3,307)	(490,772)	14,142,545	22,648,646	5,298	22,653,944

See accompanying notes to the consolidated financial statements.

SHINHAN BANK AND SUBSIDIARIES

Consolidated Statements of Changes in Equity (Continued)

For the year ended December 31, 2018

(In millions of won)		Attributable to equity holder of Shinhan Bank								
		Capital stock	Hybrid bonds	Capital surplus	Capital adjustments	Accumulated other comprehensive income (loss) (*1)	Retained earnings (*1)	Sub-total (*1)	Non-controlling interests (*1)	Total (*1)
Balance at January 1, 2018	₩	7,928,078	668,938	403,164	(3,307)	(490,772)	14,142,545	22,648,646	5,298	22,653,944
Adjustments on initial application of K-IFRS No.1109 and K-IFRS No.1115, net of income tax (Note 46)		-	-	-	-	(173,021)	(90,413)	(263,434)	(418)	(263,852)
Restated balance at January 1, 2018		7,928,078	668,938	403,164	(3,307)	(663,793)	14,052,132	22,385,212	4,880	22,390,092
Total comprehensive income (loss), net of income tax										
Profit for the year		-	-	-	-	-	2,279,049	2,279,049	313	2,279,362
Foreign currency translation differences for foreign operations		-	-	-	-	21,277	-	21,277	22	21,299
Unrealized net changes in fair values of financial assets at fair value through other comprehensive income		-	-	-	-	107,944	(3,189)	104,755	(11)	104,744
Share of other comprehensive loss of associates		-	-	-	-	(1,727)	(13)	(1,740)	-	(1,740)
Remeasurements of defined benefit plans		-	-	-	-	(70,398)	-	(70,398)	(1)	(70,399)
Total comprehensive income for the year		-	-	-	-	57,096	2,275,847	2,332,943	323	2,333,266
Transactions with owners, recognized directly in equity										
Annual dividends to equity holder		-	-	-	-	-	(540,000)	(540,000)	-	(540,000)
Dividends to hybrid bond holders		-	-	-	-	-	(25,228)	(25,228)	-	(25,228)
Issuance of hybrid bonds		-	199,547	-	-	-	-	199,547	-	199,547
Redemption of hybrid bonds		-	(169,825)	-	(175)	-	-	(170,000)	-	(170,000)
Share-based payment transactions		-	-	-	4,128	-	-	4,128	-	4,128
Capital investment in subsidiaries		-	-	-	-	-	-	-	734	734
Total transactions with owners		-	29,722	-	3,953	-	(565,228)	(531,553)	734	(530,819)
Balance at December 31, 2018	₩	7,928,078	698,660	403,164	646	(606,697)	15,762,751	24,186,602	5,937	24,192,539

(*1) The consolidated statement of changes in equity for the year ended December 31, 2018 was prepared in accordance with K-IFRS No.1109 and K-IFRS No.1115. However, the comparative consolidated statement of changes in equity for the year ended December 31, 2017 was not retrospectively restated.

See accompanying notes to the consolidated financial statements.

SHINHAN BANK AND SUBSIDIARIES
Consolidated Statements of Cash Flows
For the years ended December 31, 2018 and 2017

(In millions of won)		**2018** (*1)	**2017** (*1)
Cash flows from operating activities			
Profit before income tax	₩	3,146,404	2,159,098
Adjustments for:			
Net interest income		(5,585,994)	(4,992,051)
Dividend income		(15,662)	(100,516)
Net gain on financial assets at fair value through profit or loss		(253,832)	-
Net non-cash trading loss		-	(24,019)
Net non-cash foreign currencies transaction loss (gain)		129,495	(207,133)
Net gain on sale of financial assets at fair value through other comprehensive income		(15,288)	-
Net gain on sale of available-for-sale financial assets		-	(195,845)
Provision for credit loss allowance		245,218	-
Net impairment loss on financial assets at fair value through other comprehensive income		-	482,333
Net impairment loss on available-for-sale financial assets		-	178,228
Non-cash employee benefits		109,500	141,360
Depreciation and amortization		196,027	158,954
Net non-cash other operating expenses		(40,419)	(13,786)
Share of loss (gain) of associates		977	(1,306)
Net non-cash non-operating expenses		(5,828)	(15,870)
		(5,235,806)	(4,589,651)
Changes in assets and liabilities:			
Due from banks		6,571,282	(3,878,473)
Securities at fair value through profit or loss		(2,192,359)	-
Trading assets		-	23,330
Derivative assets		2,748,118	3,010,188
Loans at amortized cost		(22,536,002)	-
Loans at fair value through profit or loss		(34,732)	-
Loans		-	(14,611,563)
Other assets		(4,910,938)	3,109,802
Financial liabilities designated at fair value through profit or loss		-	(6,282)
Deposits		16,408,681	15,072,282
Financial liabilities at fair value through profit or loss		27,561	-
Trading liabilities		-	(52,591)
Derivative liabilities		(2,679,631)	(2,981,452)
Defined benefit liabilities		(94,396)	(125,561)
Provisions		19,817	(16,032)
Other liabilities		734,212	1,984,768
		(5,938,387)	1,528,416
Income tax paid		(509,165)	(331,970)
Interest received		9,527,836	7,989,875
Interest paid		(4,143,026)	(2,886,843)
Dividends received		18,435	104,268
Net cash provided by (used in) operating activities		(3,133,709)	3,973,193

SHINHAN BANK AND SUBSIDIARIES

Consolidated Statements of Cash Flows (Continued)

For the years ended December 31, 2018 and 2017

(In millions of won)		**2018** (*1)	**2017** (*1)
Cash flows from investing activities			
Proceeds from sale of securities at fair value through profit or loss	₩	925,774	-
Acquisition of securities at fair value through profit or loss		(925,116)	-
Proceeds from sale of securities at fair value through other comprehensive income		23,102,529	-
Acquisition of securities at fair value through other comprehensive income		(23,603,810)	-
Proceeds from sale of available-for-sale financial assets		-	23,462,272
Acquisition of available-for-sale financial assets		-	(28,581,468)
Proceeds from sale of securities at amortized cost		1,846,933	-
Acquisition of securities at amortized cost		(3,751,191)	-
Proceeds from redemption of held-to-maturity financial assets		-	1,559,419
Acquisition of held-to-maturity financial assets		-	(4,820,662)
Proceeds from sale of property and equipment		35,907	10,543
Acquisition of property and equipment		(90,625)	(84,470)
Proceeds from sale of intangible assets		2,648	4,757
Acquisition of intangible assets		(93,282)	(75,717)
Proceeds from sale of investments in associates		10,944	69,257
Acquisition of investments in associates		(21,377)	(25,298)
Proceeds from sale of investment properties		15,274	3,507
Acquisition of investment properties		(1,132)	(2,120)
Proceeds from sale of non-current assets held for sale		3,175	10,466
Proceeds from sale of other assets		945,794	930,097
Acquisition of other assets		(944,869)	(914,571)
Acquisition of subsidiaries, net of cash acquired		-	83,631
Net cash used in investing activities		(2,542,424)	(8,370,357)
Cash flows from financing activities			
Proceeds from borrowings, net		1,134,388	958,927
Proceeds from issuance of debt securities		14,749,462	10,772,423
Repayment of debt securities		(8,271,552)	(6,302,222)
Dividends paid		(563,999)	(511,165)
Issuance of hybrid bonds		199,547	199,545
Redemption of hybrid bonds		(170,000)	-
Increase of other liabilities		95,415	140,454
Decrease of other liabilities		(94,621)	(132,265)
Contribution from (payment to) non-controlling interests		734	(3,149)
Net cash provided by financing activities		7,079,374	5,122,548
Effect of exchange rate fluctuations on cash and cash equivalents held		(29,174)	(22,065)
Net increase in cash and cash equivalents		1,374,067	703,319
Cash and cash equivalents at beginning of the year (Note 40)		5,330,886	4,627,784
Cash and cash equivalents at end of the year (Note 40)	₩	6,704,953	5,331,103

(*1) The consolidated statement of cash flows for the year ended December 31, 2018 was prepared in accordance with K-IFRS No.1109 and K-IFRS No.1115. However, the comparative consolidated statement of cash flows for the year ended December 31, 2017 was not retrospectively restated.

See accompanying notes to the consolidated financial statements.

1. Reporting entity

Shinhan Bank (the "Bank"), the controlling company, is headquartered at 20, Sejong-daero 9-gil, Jung-gu, Seoul, Republic of Korea. Consolidated financial statements for the year presented herein consist of the Bank and subsidiaries (collectively referred to as "the Group"), and equity interests in associates and joint ventures of the Group.

(a) Controlling company

The Bank was established on October 1, 1943 under the name of Chohung Bank, through the merger of Hanseung Bank and Dongil Bank, which were established on February 19, 1897 and August 8, 1906, respectively, to engage in commercial banking and trust operations.

The Bank acquired Chungbuk Bank and Kangwon Bank in 1999, and the former Shinhan Bank on April 1, 2006, and subsequently changed its name to Shinhan Bank. As of December 31, 2018, the Bank has 1,585,615,506 outstanding common shares with par value of ₩7,928,078 million which Shinhan Financial Group Co., Ltd. ("Shinhan Financial Group") owns 100% of those. As of December 31, 2018, the Bank operates through 741 domestic branches, 135 depositary offices, 30 premises and 14 overseas branches.

(b) Subsidiaries included in consolidation

Details of ownerships in subsidiaries as of December 31, 2018 and 2017 were as follows:

Subsidiaries	Location	Fiscal year-end	Sector	Ownership (%)	
				December 31, 2018	December 31, 2017
Shinhan Asia	Hong Kong	December	Wholesale finance	99.99	99.99
Shinhan America	U.S.A	December	Banking	100.00	100.00
Shinhan Europe	Germany	December	Banking	100.00	100.00
Shinhan Cambodia	Cambodia	December	Banking	97.50	97.50
Shinhan Kazakhstan	Kazakhstan	December	Banking	100.00	100.00
Shinhan Canada	Canada	December	Banking	100.00	100.00
Shinhan China	China	December	Banking	100.00	100.00
Shinhan Japan	Japan	March	Banking	100.00	100.00
Shinhan Vietnam	Vietnam	December	Banking	100.00	100.00
Shinhan Mexico	Mexico	December	Banking	99.99	99.99
Shinhan Indonesia	Indonesia	December	Banking	99.00	99.00

i) Shinhan Asia Ltd.

Shinhan Asia Ltd. ("Shinhan Asia") engages in merchant banking activities in Hong Kong. As of December 31, 2018, Shinhan Asia's capital stock amounted to USD 100 million.

ii) Shinhan Bank America

Shinhan Bank America ("Shinhan America") was established on March 24, 2003 through the merger of Chohung Bank of New York and California Chohung Bank. As a result of rights offering during the year ended December 31, 2018, Shinhan America's capital stock amounted to USD 173 million as of December 31, 2018.

iii) Shinhan Bank Europe GmbH

Shinhan Bank Europe GmbH ("Shinhan Europe") was established in 1994. As of December 31, 2018, Shinhan Europe's capital stock amounted to EUR 23 million.

1. Reporting entity (continued)

(b) Subsidiaries included in consolidation (continued)

iv) Shinhan Bank Cambodia

Shinhan Khmer Bank PLC ("Shinhan Khmer") was established on October 15, 2007. Shinhan Bank Cambodia was renamed from Shinhan Khmer Bank PLC in the year ended December 31, 2018. As a result of rights offering during the year ended December 31, 2018, Shinhan Bank Cambodia's capital stock amounted to USD 75 million as of December 31, 2018.

v) Shinhan Bank Kazakhstan Limited

Shinhan Bank Kazakhstan Limited ("Shinhan Kazakhstan") was established on December 16, 2008. As of December 31, 2018, Shinhan Kazakhstan's capital stock amounted to KZT 10,029 million.

vi) Shinhan Bank Canada

Shinhan Bank Canada ("Shinhan Canada") was established on March 9, 2009. As of December 31, 2018, Shinhan Canada's capital stock amounted to CAD 80 million.

vii) Shinhan Bank China Limited

Shinhan Bank China Limited ("Shinhan China") was established on May 12, 2008. As of December 31, 2018, Shinhan China's capital stock amounted to CNY 2,000 million.

viii) Shinhan Bank Japan

Shinhan Bank Japan ("Shinhan Japan") was established on September 14, 2009. As a result of rights offering during the year ended December, 2018, Shinhan Japan's capital stock amounted to JPY 17,500 million as of December 31, 2018.

ix) Shinhan Bank Vietnam Ltd.

Shinhan Bank Vietnam Ltd. ("Shinhan Vietnam") was established on November 16, 2009 and merged with Shinhan Vina Bank on November 28, 2011. On December 17, 2017, Shinhan Vietnam acquired the retail business of ANZ Vietnam. As of December 31, 2018, Shinhan Vietnam's capital stock amounted to VND 4,547,100 million.

x) Banco Shinhan de Mexico

Banco Shinhan de Mexico ("Shinhan Mexico") was established on October 12, 2015 for obtaining the authorization of banking business. As a result of the rights offering during the year ended December 31, 2017, Shinhan Mexico's issued capital stock amounted to MXN 1,583 million as of December 31, 2018.

xi) PT Bank Shinhan Indonesia

On November 30, 2015, the Bank acquired 97.76% of voting share and obtained the control of PT Bank Metro Express, which was established on September 8, 1967 and is engaged in the banking business. PT Bank Metro Express was renamed as PT Bank Shinhan Indonesia ("Shinhan Indonesia") in 2016 and merged PT Centratama Nasional Bank, a former subsidiary of the Bank, on December 6, 2016. As a result of the rights offering during the year ended December 31, 2017, the issued capital of Shinhan Indonesia amounted to IDR 944,278 million as of December 31, 2018.

1. Reporting entity (continued)

(c) Subsidiaries included in consolidation (continued)

In addition, structured entities included in consolidation as of December 31, 2018 and 2017 were as follows:

Structured entities	Location	Fiscal period-end (month)
MPC Yulchon Green 1st	Korea	3 / 6 / 9 / 12
MPC Yulchon 2nd	Korea	3 / 6 / 9 / 12
MPC Yulchon 1st	Korea	3 / 6 / 9 / 12
S-Nuri 1st Co., Ltd.	Korea	2 / 4 / 6 / 8 / 10 / 12
Shinhan-S-Russell Co., Ltd.	Korea	3 / 6 / 9 / 12
GPS 11th Ltd.	Korea	1 / 4 / 7 / 10
Sunny Financial 1st Co., Ltd.	Korea	2 / 5 / 8 / 11
S-way 5th Co., Ltd.	Korea	10
Sunny Financial 2nd Co., Ltd.	Korea	2 / 5 / 8 / 11
Sunny Financial 9th Co., Ltd.	Korea	1 / 4 / 7 / 10
Sunny More 3rd Co., Ltd.	Korea	1 / 4 / 7 / 10
Sunny More 1st Co., Ltd.	Korea	1 / 4 / 7 / 10
Sunny More 2nd Co., Ltd.	Korea	1 / 4 / 7 / 10
Sunny More 5th Co., Ltd.	Korea	2 / 5 / 8 / 11
Sunny More 10th Co., Ltd.	Korea	2 / 5 / 8 / 11
CGN YULCHON 2nd Co., Ltd.	Korea	3 / 6 / 9 / 12
Sunny Dream 4th L.L.C	Korea	3 / 6 / 9 / 12
Sunny Dream 7th Co., Ltd.	Korea	10
Sunny Dream 9th L.L.C	Korea	2 / 5 / 8 / 11
Sunny Dream 5th Co., Ltd.	Korea	1 / 4 / 7 / 10
Sunny Russell 3rd L.L.C	Korea	2 / 5 / 8 / 11
Sunny Russell 8th Co., Ltd.	Korea	12

1. Reporting entity (continued)

(c) Subsidiaries included in consolidation (continued)

Structured entities	Location	Fiscal period-end (month)
Sunny Russell 6th Co., Ltd.	Korea	3 / 6 / 9 / 12
Shinhan-Daesung Contents Fund	Korea	12
S-smart 1st Co., Ltd.	Korea	11
Sunny Russell 1st Co., Ltd.	Korea	2
Sunny Russell 4th L.L.C	Korea	12
S-smart 5th Co., Ltd.	Korea	12
S-smart 6th Co., Ltd.	Korea	3
Sunny Russell 5th Co., Ltd.	Korea	12
S-smart 9th Co., Ltd.	Korea	12
Sunny Smart 2nd Co., Ltd.	Korea	12
Sunny Smart 8th Co., Ltd.	Korea	12
Tiger Eyes 3rd Co., Ltd.	Korea	12
Sunny Smart 5th Co., Ltd.	Korea	2 / 5 / 8 / 11
Tiger Eyes 1st Co., Ltd.	Korea	1 / 4 / 7 / 10
S-solution 2nd Co., Ltd.	Korea	2 / 5 / 8 / 11
Sunny Smart 10th Co., Ltd.	Korea	2 / 5 / 8 / 11
S-solution 3rd Co., Ltd.	Korea	2 / 5 / 8 / 11
S-solution 4th Co., Ltd.	Korea	3 / 6 / 9 / 12
S-solution 5th Co., Ltd.	Korea	3 / 6 / 9 / 12
S-solution 7th Co., Ltd.	Korea	3 / 6 / 9 / 12
Shinhan display 1st Co., Ltd.	Korea	1 / 4 / 7 / 10
S-solution 9th Co., Ltd.	Korea	10
SH inno 1st Co., Ltd.	Korea	3 / 6 / 9 / 12
Sunny solution 2nd Co., Ltd.	Korea	11
Sunny smart 3rd Co., Ltd.	Korea	2 / 5 / 8 / 11
Shinhan serveone 1st Co., Ltd.	Korea	2 / 5 / 8 / 11
Sunny Dream 1st Co., Ltd.	Korea	7
Sunny solution 1st Co., Ltd.	Korea	2 / 5 / 8 / 11
Sunny solution 3rd Co., Ltd.	Korea	1 / 4 / 7 / 10
Shinhan Display 2nd Co., Ltd.	Korea	1 / 4 / 7 / 10
Sunny solution 6th Co., Ltd	Korea	1 / 4 / 7 / 10
Sunny solution 4th Co., Ltd	Korea	3 / 6 / 9 / 12
Redefine Unjung Co., Ltd.	Korea	1 / 4 / 7 / 10
Sunny solution 9th Co., Ltd	Korea	2 / 5 / 8 / 11
Sunny solution 10th Co., Ltd	Korea	3 / 6 / 9 / 12
GIB portfolio a 1st Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB portfolio a 3rd Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB portfolio a 4th Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB portfolio a 2nd Co., Ltd.	Korea	1 / 4 / 7 / 10
S-redefine 3rd Co., Ltd.	Korea	7
GIB portfolio a 5th Co., Ltd.	Korea	1 / 4 / 7 / 10
S-Tiger 2nd Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB harim Co., Ltd.	Korea	3 / 6 / 9 / 12
Maestro werye Co., Ltd.	Korea	3 / 6 / 9 / 12
S-redefine 4th Co., Ltd.	Korea	9
Rich gate 1st Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB dochuck Co., Ltd.	Korea	10
Grand bene Co., Ltd.	Korea	3 / 6 / 9 / 12
S redefine 7th Co., Ltd.	Korea	3 / 6 / 9 / 12

1. Reporting entity (continued)

(c) Subsidiaries included in consolidation (continued)

Structured entities	Location	Fiscal period-end (month)
Development Trust	Korea	12
Non-specified Money Trust	Korea	12
Old-age Living Pension Trust	Korea	12
New-Personal Pension Trust	Korea	12
Personal Pension Trust	Korea	12
Retirement Trust	Korea	12
New Old-age Living Pension Trust	Korea	12
Pension Trust	Korea	12
Household Money Trust (Shinhan)	Korea	12
Corporation Money Trust (Shinhan)	Korea	12
Shinhan BNPP Private Corporate 25th	Korea	1

The Group consolidates a structured entity when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to most significantly affect those returns through its power over the structured entity based on the terms in the agreement relating to the establishment of the structured entity. For consolidated structured entities, the Group recognizes non-controlling interests related to the structured entity as liabilities in the consolidated statement of financial position.

As of December 31, 2018, the Group provides Asset Backed Commercial Paper (ABCP) purchase agreement amounting to ₩3,294,375 million to the structured entities described above.

1. Reporting entity (continued)

(d) Subsidiaries included in consolidation (continued)

	Subsidiaries
Newly included subsidiaries during the year ended December 31, 2018	Sunny solution 3rd Co., Ltd.
	Shinhan Display 2nd Co., Ltd.
	Sunny solution 6th Co., Ltd.
	Sunny solution 4th Co., Ltd.
	Redefine Unjung Co., Ltd.
	Sunny solution 9th Co., Ltd.
	Sunny solution 10th Co., Ltd.
	S-Tiger 3rd Co., Ltd.
	GIB portfolio a 1st Co., Ltd.
	GIB portfolio a 3rd Co., Ltd.
	GIB portfolio a 4th Co., Ltd.
	GIB portfolio a 2nd Co., Ltd.
	S-redefine 3rd Co., Ltd.
	GIB portfolio a 5th Co., Ltd.
	S-Tiger 2nd Co., Ltd.
	GIB harim Co., Ltd.
	Maestro werye Co., Ltd.
	S-redefine 4th Co., Ltd
	Rich gate 1st Co., Ltd.
	GIB dochuck Co., Ltd.
	Grand bene Co., Ltd.
	S redefine 7th Co., Ltd.
Excluded subsidiaries during the year ended December 31, 2018	GPS 4th Ltd.
	S-solution 8th Co., Ltd.
	S-dream 10th Co., Ltd.
	S-Narae 1st L.L.C.
	GPS 7th L.L.C
	Sunny More 6th Co., Ltd.
	GPS 10th Ltd.
	GPS 8th Ltd.
	Sunny Russell 2nd Co., Ltd.
	S-way 5th Co., Ltd.
	Sunny More 7th Co., Ltd.
	Shinhan BNPP Private Corporate 18th
	Sunny Russell 7th L.L.C
	S-smart 3rd Co., Ltd.
	Sunny Smart 1st Co., Ltd.
	S-Tiger 3rd Co., Ltd.

2. Basis of preparation

(a) Statement of compliance

The consolidated financial statements have been prepared in accordance with Korean International Financial Reporting Standards ("K-IFRS"), as prescribed in *the Act on External Audit of Stock Companies*.

This is the first set of the Group's annual consolidated financial statements where K-IFRS No.1109 and K-IFRS No.1115 have been applied.

The Group's consolidated financial statements have been prepared in accordance with the accounting policies stated below.

(b) Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis except for the following material items in the consolidated statements of financial position:

- derivative financial instruments are measured at fair value
- financial instruments at fair value through profit or loss ("FVTPL") are measured at fair value
- financial instruments at fair value through other comprehensive income ("FVOCI") are measured at fair value
- share-based payment arrangements are initially measured at fair value on grant date
- recognized financial instruments designated as hedged items in qualifying fair value hedge relationships and adjusted for changes in fair value attributable to the risk being hedged
- liabilities for defined benefit plans are recognized as net of the total present value of defined benefit obligations less the fair value of plan assets

(c) Functional and presentation currency

The respective financial statements of the Group entities are prepared in the functional currency of the respective operation. These consolidated financial statements are presented in Korean won, which is the Bank's functional currency and the currency of the primary economic environment in which the Group operates. Subsidiaries whose functional currency is not Korean won were as follows:

Functional currency	Subsidiaries
USD	Shinhan Asia, Shinhan America, Shinhan Cambodia
EUR	Shinhan Europe
KZT	Shinhan Kazakhstan
CAD	Shinhan Canada
CNY	Shinhan China
JPY	Shinhan Japan
VND	Shinhan Vietnam
MXN	Shinhan Mexico
IDR	Shinhan Indonesia

2. Basis of preparation (continued)

(d) Use of estimates and judgements

The preparation of the consolidated financial statements in conformity with K-IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Information about significant areas of estimation uncertainty and critical judgements in applying accounting policies that have the significant effect on the amount recognized in the consolidated financial statements is described in Note 5.

The Group recognizes credit loss allowance for expected credit losses on debt instruments, loans and receivables that are measured at amortized cost or at FVOCI, loan commitments and financial guarantee contracts upon adoption of K-IFRS No.1109, *'Financial Instruments'*. The measurement of such allowance is determined by techniques, assumptions and input variables used by the Group to measure expected future cash flows of individual financial instruments and to measure expected credit losses in a collective manner. The details of techniques, assumptions and input variables used to measure the credit loss allowance for expected credit losses as of December 31, 2018 are described in Note 4.

3. Significant accounting policies

In preparing these consolidated financial statements, the Group has consistently applied the accounting policies as listed below with those applied by the Group in its consolidated financial statements as of and for the year ended December 31, 2017, except for the changes in accounting policies as explained in (a), which are effective for annual periods beginning on January 1, 2018.

(a) Changes in accounting policies

i) K-IFRS No.1109, *'Financial Instruments'*

The Group has applied K-IFRS No.1109, *'Financial Instruments'*, which was published on September 25, 2015, from the year beginning on January 1, 2018. K-IFRS No.1109 replaced K-IFRS No.1039, *'Financial Instruments: Recognition and Measurement'*. The accounting policies related to K-IFRS No.1039 are presented in Note 3 (ab).

The main characteristics of K-IFRS No.1109 are: classification and measurement of financial instruments based on characteristics of contractual cash flows and business model, impairment model based on expected credit losses, the expansion of the types of qualifying hedging instruments and hedged items, and changes in hedge effectiveness tests, etc.

In principle, K-IFRS No.1109 should be applied retrospectively. However, there are clauses exempting the Group from restating the comparative information with respect to classification, measurement of financial instruments, and impairment. In addition, for hedge accounting, the new standard will be applied prospectively except for certain cases such as accounting for the time value of options.

3. Significant accounting policies (continued)

(a) Changes in accounting policies (continued)

The Group's consolidated financial statements as of and for the year ended December 31, 2018 have been prepared in accordance with K-IFRS No.1109, and the accompanying comparative consolidated financial statements as of and for the year ended December 31, 2017 have not been retrospectively adjusted.

Details on the adjustments to the carrying amounts of financial assets and financial liabilities, the adjustments to credit loss allowance, and the effects on equity as a result of initial application of K-IFRS No.1109 are presented in Note 46.

ii) K-IFRS No.1115, *'Revenue from Contracts with Customers'*

The Group has applied K-IFRS No.1115, '*Revenue from Contracts with Customers'*, which was published on November 6, 2015, from the year starting on January 1, 2018. K-IFRS No.1115 replaces existing revenue recognition guidance, including K-IFRS No.1018, '*Revenue'*, K-IFRS No.1011, '*Construction Contracts'*, K-IFRS No.2031, '*Revenue-Barter Transactions Involving Advertising Services'*, K-IFRS No.2113, *'Customer Loyalty Programmes'*, K-IFRS No.2115, *'Agreement for the Construction of Real Estate'*, and K-IFRS No.2118, '*Transfers of Assets from Customers*.'

According to K-IFRS No.1115, all types of contracts recognize revenue through five-step revenue recognition model (① 'Identifying the contract' → ② 'Identifying performance obligations' → ③ 'Determining the transaction price' → ④ 'Allocating the transaction price to performance obligations' → ⑤ 'Recognizing the revenue by satisfying performance obligations').

The Group elected to retrospectively apply K-IFRS No.1115 and reflected the cumulative financial effect of the initial application of K-IFRS No.1115 at the date of initial recognition, in accordance with the transitional provision of K-IFRS No.1115. The accompanying comparative consolidated financial statements as of and for the year ended December 31, 2017 have not been retrospectively adjusted. Effects on equity as a result of initial application of K-IFRS No.1115 are presented in Note 46.

iii) Amendments to K-IFRS No.1040, *'Investment Property'*

The Group has applied the amendments on K-IFRS No.1040, *'Investment Property'* from the year beginning on January 1, 2018. The amendments clarify that an entity shall transfer a property to, or from, investment property when, and only when, there is a change in use. A change in use occurs when the property meets, or ceases to meet, the definition of investment property and there is evidence of the change in use. And it is clarified that the provisions on the transfers of investment property is applied to the properties that are being constructed or developed. The amendments did not have a significant impact on the Group's consolidated financial statements.

iv) Amendments to K-IFRS No.1102, *'Share-based Payment'*

The Group has applied the amendments on K-IFRS No.1102, *'Share-based Payment'* from the year beginning on January 1, 2018.

Amendments to K-IFRS No.1102 clarify accounting for a modification to the terms and conditions of a share-based payment that changes the classification of the transaction from cash-settled to equity-settled. The amendments also clarify that the measurement approach should treat the terms and conditions of a cash-settled award in the same way as for an equity-settled award. The amendments did not have a significant impact on the Group's consolidated financial statements.

3. Significant accounting policies (continued)

(b) Basis of consolidation

i) Subsidiaries

Subsidiaries are investees controlled by the Group. The Group controls an investee when it is exposed to, or has rights to, variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

If a member of the Group uses accounting policies other than those adopted in the consolidated financial statements for the same transactions and events in similar circumstances, appropriate adjustments are made to its financial statements in preparing the consolidated financial statements.

There is no non-controlling interest in structured entities because the ownership interests in structured entities are shown as liabilities of the Group.

ii) Intra-group transactions eliminated on consolidation

Intra-group balances, transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Intra-group losses are recognized as expense if intra-group losses indicate an impairment that requires recognition in the consolidated financial statements.

iii) Non-controlling interests

Non-controlling interests in a subsidiary are accounted for separately from the parent’s ownership interests in a subsidiary. Each component of net profit or loss and other comprehensive income is attributed to the owners of the parent and non-controlling interest holders, even when the allocation reduces the non-controlling interests balance below zero.

3. Significant accounting policies (continued)

(c) Business combinations

i) Business combinations

A business combination is accounted for by applying the acquisition method, unless it is a combination involving entities or businesses under common control.

Each identifiable asset and liability is measured at its acquisition-date fair value except for below:
- Leases and insurance contracts are required to be classified on the basis of the contractual terms and other factors
- Only those contingent liabilities assumed in a business combination that are a present obligation and can be measured reliably are recognized
- Deferred tax assets or liabilities are recognized and measured in accordance with K-IFRS No.1012, '*Income Taxes'*
- Employee benefit arrangements are recognized and measured in accordance with K-IFRS No.1019, '*Employee Benefits'*
- Indemnification assets are recognized and measured on the same basis as the indemnified liability or asset
- Reacquired rights are measured in accordance with special provisions
- Liabilities or equity instruments related to share-based payment transactions are measured in accordance with the method in K-IFRS No.1102, '*Share-based Payment'*
- Non-current assets held for sale are measured at fair value less costs to sell in accordance with K-IFRS No.1105, '*Non-current Assets Held for Sale and Discontinued Operations'*

As of the acquisition date, non-controlling interests in the acquiree are measured as the non-controlling interests' proportionate share of the acquiree's identifiable net assets.

The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the acquirer, the liabilities incurred by the acquirer to former owners of the acquiree and the equity interests issued by the acquirer. However, any portion of the acquirer's share-based payment awards exchanged for awards held by the acquiree's employee that is included in consideration transferred in the business combination shall be measured in accordance with the method described above rather than at fair value.

Acquisition-related costs are costs the acquirer incurs to effect a business combination. Those costs include finder's fees; advisory, legal, accounting, valuation and other professional or consulting fees; general administrative costs, including the costs of maintaining an internal acquisitions department; and costs of registering and issuing debt and equity securities. Acquisition-related costs, other than those associated with the issue of debt or equity securities, which are recognized in accordance with K-IFRS No.1032, '*Financial Instruments: Presentation*' and K-IFRS No.1109, '*Financial Instruments',* are expensed in the periods in which the costs are incurred and the services are received.

3. Significant accounting policies (continued)

(c) Business combinations (continued)

ii) Goodwill

The Group measures goodwill at the acquisition date as:
- the fair value of the consideration transferred; plus
- the recognized amount of any non-controlling interests in the acquiree; plus
- if the business combination is achieved in stages, the fair value of the pre-existing equity interest in the acquiree; less
- the net recognized amount (generally fair value) of the identifiable assets acquired and liabilities assumed.

When the excess is negative, a bargain purchase gain is recognized immediately in profit or loss.

When the Group additionally acquires non-controlling interest, the Group does not recognize goodwill since the transaction is regarded as equity transaction.

As part of its transition to K-IFRS, the Group elected to restate only those business combinations which occurred on or after January 1, 2010 in accordance with K-IFRS. In respect of acquisitions prior to January 1, 2010, goodwill is included on the basis of its deemed cost, which represents the amount recorded under previous Generally Accepted Accounting Principles ("GAAP").

(d) Investments in associates

An associate is an entity in which the Group has significant influence, but not control, over the entity's financial and operating policies. Significant influence is presumed to exist when the Group holds between 20 and 50 percent of the voting power of another entity.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

The investment in an associate and a joint venture is initially recognized at cost, and the carrying amount is increased or decreased to recognize the Group's share of the profit or loss and changes in equity of the associate and the joint venture after the date of acquisition. Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Intra-group losses are recognized as expense if intra-group losses indicate an impairment that requires recognition in the consolidated financial statements.

If an associate or a joint venture uses accounting policies different from those of the Group for like transactions and events in similar circumstances, appropriate adjustments are made to its financial statements in applying the equity method.

When the Group's share of losses exceeds its interest in an equity accounted investee, the carrying amount of that interest, including any long-term investments, is reduced to nil and the recognition of further losses is discontinued except to the extent that the Group has an obligation or has to make payments on behalf of the investee for further losses.

3. Significant accounting policies (continued)

(e) Operating segments

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Group's other components, whose operating results are reviewed regularly by the chief operating decision maker to make decisions about resources allocated to each segment and assess its performance, and for which discrete financial information is available.

The segment reporting to a chief executive officer includes items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly general expenses and income tax assets and liabilities. The Group considers the Chief Executive Officer ("CEO") of the Bank as the chief operating decision maker.

(f) Foreign currencies

i) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of Group at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency using the reporting date's exchange rate. The foreign currency gain or loss on monetary items is the difference between amortized cost in the functional currency at the beginning of the period, adjusted for effective interest and payments during the period, and the amortized cost in foreign currency translated at the exchange rate at the end of the reporting period. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined.

Foreign currency differences arising on retranslation are recognized in profit or loss, except for differences arising on the retranslation of available-for-sale equity instruments, a financial liability designated as a hedging instrument of the net investment in a foreign operation or a qualifying cash flow hedge, which are recognized in other comprehensive income. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

ii) Foreign operations

If the presentation currency of the Group is different from a foreign operation's functional currency, the financial statements of the foreign operation are translated into the presentation currency using the following methods:

The assets and liabilities of foreign operations, whose functional currency is not the currency of a hyperinflationary economy, are translated to presentation currency at exchange rates at the reporting date. The income and expenses of foreign operations are translated to functional currency at exchange rates at the dates of the transactions. Foreign currency differences are recognized in other comprehensive income.

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation are treated as assets and liabilities of the foreign operation and are translated using the exchange rate at the reporting date.

3. Significant accounting policies (continued)

(f) Foreign currencies (continued)

When a foreign operation is disposed of, the relevant amount in the translation is transferred to profit or loss as part of the profit or loss on disposal. On the partial disposal of a subsidiary that includes a foreign operation, the relevant proportion of such cumulative amount is reattributed to non-controlling interest. In any other partial disposal of a foreign operation, the relevant proportion is reclassified to profit or loss.

iii) Net investment in a foreign operation

If the settlement of a monetary item receivable from or payable to a foreign operation is neither planned nor likely in the foreseeable future, then foreign currency differences arising on the item form part of the net investment in the foreign operation and are recognized in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment.

(g) Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits with original maturities of three months or less from the acquisition date that are subject to an insignificant risk of changes in their fair value, and are used by the Group in the management of its short-term commitments. Equity instruments are excluded from cash equivalents unless they are, in substance, cash equivalents, for example in the case of preferred shares acquired within a short period of their maturity and with a specified redemption date. However, the Group's account overdraft is included in borrowings.

(h) Non-derivative financial assets

Financial assets are recognized when the Group becomes a party to the contractual provisions of the instrument. In addition, a regular way purchase or sale (a purchase or sale of a financial asset under a contract whose terms require delivery of the asset within the time frame established generally by regulation or convention in the market concerned) is recognized on the trade date.

A financial asset is measured initially at its fair value plus, for an item not at FVTPL, transaction costs that are directly attributable to its acquisition of the financial asset. Transaction costs on the financial assets at FVTPL that are directly attributable to the acquisition are recognized in profit or loss as incurred.

i) Financial assets designated at FVTPL

Financial assets can be irrevocably designated as measured at FVTPL despite of classification standards stated below, if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise from measuring assets or liabilities or recognizing the gains or losses on them on different bases.

3. Significant accounting policies (continued)

(h) Non-derivative financial assets (continued)

ii) Equity instruments

For the equity instruments that are not held for trading, at initial recognition, the Group may make an irrevocable election to present subsequent changes in fair value in other comprehensive income. Equity instruments that are not classified as financial assets at FVOCI are classified as financial assets at FVTPL.

The Group subsequently measures all equity investments at fair value. Valuation gains or losses of the equity instruments that are classified as financial assets at FVOCI previously recognized as other comprehensive income is not reclassified as profit or loss on derecognition. The Group recognizes dividends in profit or loss when the Group's right to receive payments of the dividend is established.

Valuation gains or losses due to changes in fair value of the financial assets at FVTPL are recognized as gains or losses on financial assets at FVTPL. Impairment loss (reversal) on equity instruments at FVOCI is not recognized separately.

iii) Debt instruments

Subsequent measurement of debt instruments depends on the Group's business model in which the asset is managed and the contractual cash flow characteristics of the asset. Debt instruments are classified as financial assets at amortized cost, at FVOCI, or at FVTPL. Debt instruments are reclassified only when the Group's business model changes.

ⓐ Financial assets at amortized cost

Assets that are held within a business model whose objective is to hold assets to collect contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. Impairment losses, and gains or losses on derecognition of the financial assets at amortized cost are recognized in profit or loss. Interest income on the effective interest method is included in the 'Interest income' in the consolidated statement of comprehensive income.

ⓑ Financial assets at FVOCI

Assets that are held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Other than impairment losses, interest income amortized using effective interest method and foreign exchange differences, gains or losses of the financial assets at FVOCI are recognized as other comprehensive income in equity. On derecognition, gains or losses accumulated in other comprehensive income are reclassified to profit or loss. The interest income on the effective interest method is included in the 'Interest income' in the consolidated statement of comprehensive income. Foreign exchange differences and impairment losses are included in the 'Net foreign currency transaction gain' and 'Impairment loss on financial assets' in the consolidated statement of comprehensive income, respectively.

ⓒ Financial assets at FVTPL

Debt securities other than financial assets at amortized costs or FVOCI are classified at FVTPL. Unless hedge accounting is applied, gains or losses from financial assets at FVTPL are recognized as profit or loss and are included in 'Net gain on financial assets at fair value through profit or loss' in the consolidated statement of comprehensive income.

3. Significant accounting policies (continued)

(h) Non-derivative financial assets (continued)

iv) Embedded derivatives

Financial assets with embedded derivatives are classified regarding the entire hybrid contract, and the embedded derivatives are not separately recognized. The entire hybrid contract is considered when it is determined whether the contractual cash flows represent solely payments of principal and interest.

v) Derecognition of financial assets

The Group derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in transferred financial assets that is created or retained by the Group is recognized as a separate asset or liability.

If the Group retains substantially all the risks and rewards of ownership of the transferred financial assets, the Group continues to recognize the transferred financial assets and recognizes financial liabilities for the consideration received.

vi) Offsetting

Financial assets and financial liabilities are offset and the net amount is presented in the consolidated statement of financial position only when the Group currently has a legally enforceable right to set off the recognized amounts, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

3. Significant accounting policies (continued)

(i) Expected credit loss on financial assets

As for financial assets at amortized cost and financial assets at FVOCI, the expected credit loss is evaluated at the end of each period and recognized as loss allowances.

Since initial recognition, a loss allowance shall be measured by the three stages in the table below depending on the extent of significant increase in credit risk.

Stage	Category	Description
Stage 1	Credit risk has not increased significantly since initial recognition	12 month expected credit losses: Expected credit loss resulting from potential default of financial instruments occurring over 12 months from the end of reporting period
Stage 2	Credit risk has increased significantly since initial recognition	Lifetime expected credit losses: Expected credit loss resulting from all potential default of financial instruments occurring over the expected life
Stage 3	Credit-impaired financial assets	

However, as for the financial assets whose credit is impaired at the initial recognition, only the cumulative change in the lifetime expected credit loss is recognized as the loss allowance.

The 'lifetime' refers to the expected life to the contractual maturity of the financial asset.

i) Forward looking information

The Group determines a material increase on credit risk and estimates the expected credit loss on a forward looking basis.

The measuring factors of the expected credit loss are assumed to have certain relationship with the economic cycle. Through relationship analysis between the macroeconomic variables and the credit risk measuring factors, the forward looking information is reflected in the expected credit loss estimation.

ii) Financial assets at amortized cost

The expected credit loss on the financial assets at amortized cost is recognized as the difference between the present value of the contractual cash flow and the present value of the expected cash flow. The expected cash flow is estimated separately for the individually material financial assets.

For the financial assets which are not individually material, they are included in a group of assets with a similar credit risk and expected credit loss is estimated collectively.

The expected credit losses of financial assets measured as amortized cost are presented net of loss allowance, and the allowance is derecognized together with the asset when it is determined to be unrecoverable. When the loan previously written-off is subsequently collected, it is recognized as an increase in loss allowance. At each reporting date, the Group recognizes in profit or loss the amount of the change in lifetime expected credit losses.

iii) Financial assets at FVOCI

The expected credit loss on the financial assets at FVOCI is calculated using the same method as that on the financial assets at amortized cost, however the changes in loss allowance are recognized as other comprehensive income. As for disposal and repayment, the loss allowance is reclassified from other comprehensive income to profit or loss.

3. Significant accounting policies (continued)

(j) Derivative financial instruments

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are accounted for as described below.

i) Hedge accounting

The Group holds forward exchange contracts, interest rate swaps, currency swaps and other derivative contracts to manage interest rate risk and foreign exchange risk. The Group designated derivatives as hedging instruments to hedge the risk of changes in the fair value of assets, liabilities or firm commitments (a fair value hedge) and foreign currency risk of highly probable forecasted transactions or firm commitments (a cash flow hedge), and foreign currency risk of net investment in foreign operation (net investment hedges).

On initial designation of the hedge, the Group formally documents the relationship between the hedging instrument(s) and hedged item(s), including the risk management objectives and strategy in undertaking the hedge transaction, together with the methods that will be used to assess the effectiveness of the hedging relationship.

ii) Fair value hedges

Changes in the fair value of a derivative hedging instrument designated as a fair value hedge are recognized in profit or loss. The gain or loss from remeasuring the hedging instrument at fair value and the gain or loss on the hedged item attributable to the hedged risk are recognized in profit or loss in the same line item of the consolidated statement of comprehensive income.

The Group discontinues fair value hedge accounting if the hedging instrument expires or is sold, terminated or exercised, or if the hedge no longer meets the criteria for hedge accounting. Any adjustment arising from gain or loss on the hedged item attributable to the hedged risk is amortized to profit or loss from the date the hedge accounting is discontinued.

3. <u>Significant accounting policies (continued)</u>

(j) Derivative financial instruments (continued)

iii) Cash flow hedges

When a derivative is designated as the hedging instrument in a hedge of the variability in cash flows attributable to a particular risk associated with a recognized asset or liability or a highly probable forecasted transaction that could affect profit or loss, the effective portion of changes in the fair value of the derivative is recognized in other comprehensive income and presented in the hedging reserve in equity. The amount recognized in other comprehensive income is removed and included in profit or loss in the same period as the hedged cash flows affect profit or loss under the same line item in the consolidated statements of comprehensive income as the hedged item. Any ineffective portion of changes in the fair value of the derivative is recognized immediately in profit or loss.

Once hedge accounting is discontinued, any cumulative gain or loss existing in equity at that time and is recognized over the period the forecast transaction occurs as profit or loss. However, when a forecast transaction is no longer expected to occur, the cumulative gain or loss recognized in equity is immediately recognized in the profit or loss.

If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated, exercised, or the designation is revoked, then hedge accounting is discontinued prospectively. The cumulative gain or loss previously recognized in other comprehensive income and presented in the hedging reserve in equity remains there until the forecasted transaction affects profit or loss. When the hedged item is a non-financial asset, the amount recognized in other comprehensive income is transferred to the carrying amount of the asset when the asset is recognized. If the forecasted transaction is no longer expected to occur, then the balance in other comprehensive income is recognized immediately in profit or loss. In other cases the amount recognized in other comprehensive income is transferred to profit or loss in the same period that the hedged item affects profit or loss.

iv) Hedge of net investment

Foreign currency differences arising on the retranslation of a financial liability designated as a hedge of a net investment in a foreign operation are recognized in other comprehensive income to the extent that the hedge is effective. To the extent that the hedge is ineffective, such differences are recognized in profit or loss. When the hedged part of a net investment is disposed of, the relevant amount in the accumulated other comprehensive income is transferred to profit or loss as part of the profit or loss on disposal in accordance with K-IFRS No.1021, *'The Effects of Changes in Foreign Exchange Rates'*.

v) Embedded derivatives

Embedded derivatives are separated from the host contract and accounted for separately only if the economic characteristics and risks of the host contract and the embedded derivative are not closely related; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the combined instrument is not designated at FVTPL. Changes in the fair value of separable embedded derivatives are recognized immediately in profit or loss.

vi) Derivative financial instruments held for trading

Changes in the fair value of derivative financial instruments not designated as a hedging instrument are recognized immediately in profit or loss.

3. Significant accounting policies (continued)

(j) Derivative financial instruments (continued)

vii) Day one profit or loss

If the Group uses a valuation technique that incorporates data not obtained from observable markets for the fair value at initial recognition of financial instruments, there may be a difference between the transaction price and the amount determined using that valuation technique. As for these circumstances, the difference between the fair value at the initial recognition and the transaction price is not recognized as profit or loss but deferred. The deferred difference is amortized by using straight line method over the life of the financial instruments.

(k) Property and equipment

Property and equipment are initially measured at cost and after initial recognition. The cost of property and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Property and equipment are carried at cost less accumulated depreciation and accumulated impairment losses. Certain land and buildings are measured at fair value at the date of transition to K-IFRS, which is deemed cost, in accordance with K-IFRS No.1101, *'First-time Adoption of K-IFRS'*. Dividend from relevant revaluation surplus is prohibited in accordance with the resolution of the board of directors.

The Group recognizes in the carrying amount of an item of property and equipment the cost of replacing part of property and equipment when that cost is incurred if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of those parts that are replaced is derecognized. The costs of the day-to-day servicing of property and equipment are recognized in profit or loss as incurred.

Land is not depreciated. Other property and equipment are depreciated on a straight-line basis over the estimated useful lives, which most closely reflect the expected pattern of consumption of the future economic benefits embodied in the asset. Leased assets under finance leases are depreciated over the shorter of the lease term and their useful lives. The estimated useful lives for the current and comparative periods are as follows:

Descriptions	Useful lives
Buildings	40 years
Other properties	4~5 years

The gain or loss arising from the derecognition of an item of property and equipment, which is included in profit or loss, is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item.

Depreciation methods, useful lives and residual values are reassessed at each fiscal year-end and any adjustment is accounted for as a change in accounting estimate.

(l) Intangible assets

Intangible assets are measured initially at cost and, subsequently, are carried at cost less accumulated amortization and accumulated impairment losses.

3. Significant accounting policies (continued)

(l) Intangible assets (continued)

Amortization of intangible assets except for goodwill is calculated on a straight-line basis over the estimated useful lives of intangible assets as below from the date that they are available for use. The residual value of intangible assets is zero. However, as there are no foreseeable limits to the periods over which club memberships are expected to be available for use, this intangible asset is determined as having indefinite useful lives and not amortized.

Descriptions	Useful lives
Software and capitalized development cost	5 years
Other intangible assets	5 years or contract periods, whichever the shorter

Amortization periods and the amortization methods for intangible assets with finite useful lives are reviewed at the end of each reporting period. The useful lives of intangible assets that are not being amortized are reviewed at the end of each reporting period to determine whether events and circumstances continue to support indefinite useful life assessments for those assets. Changes are accounted for as changes in accounting estimates.

Expenditures on research activities, undertaken with the prospect of gaining new technical knowledge and understanding, are recognized in profit or loss as incurred. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

(m) Investment properties

Investment property is property held either to earn rental income or for capital appreciation or both. An investment property is initially recognized at cost including any directly attributable expenditure. Subsequent to initial recognition, the asset is measured at cost less accumulated depreciation and accumulated impairment losses, if any.

The depreciation method and the estimated useful lives for the current and comparative periods were as follows:

Descriptions	Depreciation method	Useful lives
Buildings	Straight-line	40 years

Subsequent costs are recognized in the carrying amount of investment property at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing are recognized in profit or loss as incurred.

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting date and adjusted, if appropriate. The change is accounted for as changes in accounting estimates.

3. Significant accounting policies (continued)

(n) Leases

The Group classifies and accounts for leases as either a finance or operating lease, depending on the terms. Leases where the Group assumes substantially all of the risks and rewards of ownership are classified as finance leases. All other leases are classified as operating leases.

i) Finance leases

At the commencement of the lease term, the Group recognizes as finance assets and finance liabilities in its consolidated statements of financial position, the lower amount of the fair value of the leased property and the present value of the minimum lease payments, each determined at the inception of the lease. Any initial direct costs are added to the amount recognized as an asset.

Minimum lease payments are apportioned between the finance charge and the reduction of the outstanding liability. The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability. Contingent rents are charged as expenses in the periods in which they are incurred.

The depreciable amount of a leased asset is allocated to each accounting period during the period of expected use on a systematic basis consistent with the depreciation policy the lessee adopts for depreciable assets that are owned. If there is no reasonable certainty that the lessee will obtain ownership by the end of the lease term, the asset is fully depreciated over the shorter of the lease term and its useful life. The Group reviews to determine whether the leased asset may be impaired.

ii) Operating leases

Payments made under operating leases are recognized in profit or loss on a straight-line basis over the period of the lease.

(o) Non-current assets held for sale

Assets, or disposal groups comprising assets and liabilities, that are expected to be recovered primarily through sale rather than through continuing use, are classified as held for sale. In order to be classified as held for sale, the asset (or disposal group) must be available for immediate sale in its present condition and its sale must be highly probable. The assets or disposal group that are classified as assets held for sale are measured at the lower of their carrying amount and fair value less cost to sell.

The Group recognizes an impairment loss for any initial or subsequent write-down of an asset (or disposal group) to fair value less costs to sell, and a gain for any subsequent increase in fair value less costs to sell, up to the cumulative impairment loss previously recognized.

An asset that is classified as held for sale or part of a disposal group classified as held for sale is not depreciated (or amortized).

3. Significant accounting policies (continued)

(p) Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets, other than assets arising from employee benefits, deferred tax assets and non-current assets held for sale, are reviewed at the end of the reporting period to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, are tested for impairment annually by comparing their recoverable amount to their carrying amount.

The Group estimates the recoverable amount of an individual asset, if it is impossible to measure the individual recoverable amount of an asset, then the Group estimates the recoverable amount of cash-generating unit ("CGU"). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or group of assets. The recoverable amount of an asset or a CGU is the greater of its value in use and its fair value less costs to sell. The value in use is estimated by applying a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or the CGU for which estimated future cash flows have not been adjusted, to the estimated future cash flows expected to be generated by the asset or the CGU.

An impairment loss is recognized if the carrying amount of an asset or a CGU exceeds its recoverable amount. Impairment losses are recognized in profit or loss.

Goodwill acquired in a business combination is allocated to each CGU that is expected to benefit from the synergies arising from the goodwill acquired. Any impairment identified at the CGU level will first reduce the carrying value of goodwill and then be used to reduce the carrying amount of the other assets in the CGU on a pro rata basis. Except for impairment losses in respect of goodwill which are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

(q) Non-derivative financial liabilities

The Group recognizes financial liabilities in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the financial liability in accordance with the substance of the contractual arrangement and the definitions of financial liabilities.

Transaction costs on the financial liabilities at FVTPL are recognized in profit or loss as incurred.

i) Financial liabilities designated at FVTPL

Financial liabilities can be irrevocably designated as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases, or a group of financial instruments is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy. The amount of change in the fair value of the financial liabilities designated at FVTPL that is attributable to changes in the credit risk of that liabilities shall be presented in other comprehensive income.

ii) Financial liabilities at FVTPL

Since initial recognition, financial liabilities at FVTPL is measured at fair value, and changes in the fair value are recognized as profit or loss.

3. Significant accounting policies (continued)

(q) Non-derivative financial liabilities (continued)

iii) Other financial liabilities

Non-derivative financial liabilities other than financial liabilities at fair value through profit or loss are classified as other financial liabilities. At the date of initial recognition, other financial liabilities are measured at fair value minus transaction costs that are directly attributable to the acquisition. Subsequent to initial recognition, other financial liabilities are measured at amortized cost using the effective interest method.

The Group derecognizes a financial liability from the consolidated statement of financial position when it is extinguished (i.e. when the obligation specified in the contract is discharged, cancelled or expires).

(r) Equity capital

i) Capital stock

Capital stock is classified as equity. Incremental costs directly attributable to the transaction of stock are deducted from equity, net of any tax effects.

ii) Hybrid bonds

The Group classifies an issued financial instrument, or its component parts, as a financial liability or an equity instrument depending on the substance of the contractual arrangement of such financial instrument. Hybrid bonds where the Group has an unconditional right to avoid delivering cash or another financial asset to settle a contractual obligation are classified as an equity instrument and presented in equity.

iii) Non-controlling interests

Non-controlling interests, which represent the equity in a subsidiary not attributable, directly or indirectly, to a parent's ownership interests, consist of the amount of those non-controlling interests at the date of the original combination calculated in accordance with K-IFRS No.1103, '*Business Combinations'* and the non-controlling interests share of changes in equity since the date of the combination.

3. Significant accounting policies (continued)

(s) Employee benefits

i) Short-term employee benefits

Short-term employee benefits are employee benefits that are due to be settled within 12 months after the end of the period in which the employees render the related service. When an employee has rendered service to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

ii) Other long-term employee benefits

The Group's net obligation in respect of other long-term employee benefits that are not expected to be settled wholly before 12 months after the end of the annual reporting period in which the employees render the related service, is the amount of future benefit that employees have earned in return for their service in the current and prior periods. That benefit is discounted to determine its present value. Remeasurements are recognized in profit or loss in the period in which they arise.

iii) Retirement benefits: defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Group's net obligation in respect of defined benefit plans is calculated by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of plan assets is deducted. The calculation is performed annually by an independent actuary using the projected unit credit method.

The discount rate is the yield at the reporting date on high-quality corporate bonds that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid. The Group recognizes service cost and net interest on the net defined benefit liability (asset) in profit or loss and remeasurements of the net defined benefit liability (asset) in other comprehensive income.

iv) Retirement benefits: defined contribution plans

The Group recognizes the contribution expense as an account of severance payments in profit or loss in the period according to the defined contribution plans.

v) Termination benefits

Termination benefits are expensed at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognizes costs for a restructuring. If benefits are not expected to be wholly settled within 12 months of the reporting date, then they are discounted.

3. Significant accounting policies (continued)

(t) Share-based payment transactions

The grant date fair value of share-based payment awards granted to employees is recognized as an employee expense, with a corresponding increase in equity, over the period that the employees unconditionally become entitled to the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and non-market vesting conditions are expected to be met, such that the amount ultimately recognized as an expense is based on the number of awards that do meet the related service and non-market performance conditions at the vesting date. For share-based payment awards with non-vesting conditions, the grant date fair value of the share-based payment is measured to reflect such conditions and there is no true-up for differences between expected and actual outcomes.

The fair value of the amount payable to employees in respect of share appreciation rights, which are settled in cash, is recognized as an expense with a corresponding increase in liabilities, over the period that the employees unconditionally become entitled to payment. The liability is remeasured at each reporting date and at settlement date. Any changes in the fair value of the liability are recognized as personnel expense in profit or loss.

The Group has granted share-based payment based on Shinhan Financial Group’s share to the employees. In accordance with a repayment arrangement with Shinhan Financial Group, the Group is required to pay Shinhan Financial Group for the provision of the share-based payments. The Group recognizes the costs as expenses and accrued expenses in liabilities for the service period. When vesting conditions are not satisfied because of death, retirement or dismissal of employees during the specified service period, no amount is recognized for goods or services received on a cumulative basis. Share-based payment arrangements in which the Group has no obligation to settle the share-based payment transaction are accounted for as equity-settled share-based payment transactions, regardless of the repayment arrangement with Shinhan Financial Group.

(u) Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The risks and uncertainties that inevitably surround many events and circumstances are taken into account in reaching the best estimate of a provision. Where the effect of the time value of money is material, provisions are determined at the present value of the expected future cash flows.

Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimate. If it is no longer probable that an outflow of resources embodying economic benefits will be required to settle the obligation, the provision is reversed.

Provisions shall be used only for expenditures for which the provisions are originally recognized.

3. Significant accounting policies (continued)

(v) Financial guarantee contract

A financial guarantee contract is a contract that requires the Group to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument. Financial guarantee contracts are recognized initially at their fair value, and the initial fair value is amortized over the life of the financial guarantee contract. The financial guarantee liability is subsequently measured at the higher of the amount of the best estimate of the expenditure required to settle the present obligation at the end of reporting period; and the amount initially recognized less, cumulative amortization recognized on a straight-line basis over the guarantee period. Financial guarantee liabilities are included within other liabilities.

From January 1, 2018, after initial recognition, financial guarantee contracts are measured at the higher of:
- Loss allowance in accordance with K-IFRS No.1109, '*Financial Instruments*'
- The amount initially recognized less, when appropriate, the cumulative amount of income recognized in accordance with the principles of K-IFRS No.1115, '*Revenue from Contracts with Customers*'

(w) Recognition of revenues and expenses

Other than those under the scope of K-IFRS No.1017, *'Leases'*, K-IFRS No.1028, *'Investments in Associates and Joint Ventures'*, K-IFRS No.1109, *'Financial Instruments'*, K-IFRS No.1110, *'Consolidated Financial Statements'*, and K-IFRS No.1111, *'Joint Arrangements'*, the Group's revenues are recognized using five-step revenue recognition model as follows: ① 'Identifying the contract' → ② 'Identifying performance obligations' → ③ 'Determining the transaction price' → ④ 'Allocating the transaction price to performance obligations' → ⑤ 'Recognizing the revenue by satisfying performance obligations'.

i) Interest income and expense

Interest income and expense are in the scope of K-IFRS No.1109 and recognized in profit or loss using the effective interest method. The effective interest rate is the rate that exactly discounts the estimated future cash payments and receipts through the expected life of the financial asset or liability or, where appropriate, a shorter period to the net carrying amount of the financial asset or liability. When calculating the effective interest rate, the Group estimates cash flows considering all contractual terms of the financial instrument, but does not consider future credit losses. The calculation includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate, and all other premiums or discounts. When it is not possible to estimate reliably the cash flows or the expected life of a financial instrument, the Group uses the contractual cash flows over the full contractual term of the financial instrument.

Once a financial asset or a group of similar financial assets has been written down as a result of an impairment loss, interest income is thereafter recognized using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

ii) Fees and commission

The recognition of revenue for financial service fees depends on the purposes for which the fees are assessed and the basis of accounting for any associated financial instrument.

3. Significant accounting policies (continued)

(w) Recognition of revenues and expenses (continued)

ⓐ Fees that are an integral part of the effective interest rate of a financial instrument

Such fees are generally treated as an adjustment to the effective interest rate. Such fees may include compensation for activities such as evaluating the borrower's financial condition, evaluating and recording guarantees, collateral and other security arrangements, preparing and processing documents, closing the transaction and the origination fees received on issuing financial liabilities. However, when the financial instrument is measured at fair value with the change in fair value recognized in profit or loss, the fees are recognized as revenue when the instrument is initially recognized.

ⓑ Fees earned as services are provided

Fees and commission income, including investment management fees, sales commission, and account servicing fees, are recognized as revenue when the related service as a performance obligation is provided.

ⓒ Fees that are earned on the execution of a significant act

The fees that are earned on the execution of a significant act including commission on the allotment of shares or other securities to a client, placement fee for arranging a loan between a borrower and an investor and sales commission, are recognized as revenue when the significant act as a performance obligation has been completed.

iii) Dividends

Dividends income is recognized when the shareholder's right to receive payment is established. Usually this is the ex-dividend date for equity securities.

(x) Income tax

Income tax expense comprises current and deferred tax. Current tax and deferred tax are recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

Shinhan Financial Group, the parent company, files its national income tax return with the Korean tax authorities under the consolidated corporate tax system, which allows it to make national income tax payments based on the consolidated profits or losses of the Shinhan Financial Group and its wholly owned domestic subsidiaries including the Group. Deferred taxes are measured based on the future tax benefits expected to be realized in consideration of the expected profits or losses of eligible companies in accordance with the consolidated corporate tax system. Consolidated corporate tax amounts, once determined, are allocated to each of the subsidiaries and are used as a basis for the income taxes to be recorded in their stand-alone financial statements.

The Group recognizes deferred tax liabilities for all taxable temporary differences associated with investments in subsidiaries, associates, and interests in joint ventures, except to the extent that the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The Group recognizes deferred tax assets for all deductible temporary differences arising from investments in subsidiaries and associates, to the extent that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

3. Significant accounting policies (continued)

(x) Income tax (continued)

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and deferred tax assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period to recover or settle the carrying amount of its assets and liabilities.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and reduced the carrying amount to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized.

Deferred tax assets and liabilities are offset only if there is a legally enforceable right to offset the related current tax liabilities and assets, and they relate to income taxes levied by the same tax authority and they intend to settle current tax liabilities and assets on a net basis.

If any additional income tax expense exists by payment of dividends, the Group recognizes it when the liability relating to the payment is recognized.

(y) Accounting for trust accounts

The Group accounts for trust accounts separately from its bank accounts under *the Financial Investment Services and Capital Markets Act* and thus the trust accounts are not included in the accompanying consolidated financial statements. Borrowings from trust accounts are included in other liabilities. Trust fees and commissions in relation to the service provided to trust accounts by the Group are recognized as fees and commission income.

(z) Earnings per share

The Group presents basic and diluted earnings per share (EPS) data for its ordinary shares. Basic EPS is calculated by dividing the profit or loss attributable to the ordinary shareholder of the Bank by the weighted average number of common shares outstanding during the period, adjusted for own shares held. Diluted EPS is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of ordinary shares outstanding, adjusted for own shares held, for the effects of all dilutive potential ordinary shares, which comprise share options granted to employees.

(aa) New standards and interpretations not yet adopted

The following new standards, interpretations and amendments to existing standards have been published and are mandatory for the Group for annual period beginning after January 1, 2018, and the Group has not early adopted them.

The Group is currently evaluating the effects from the application of these new standards on the consolidated financial statements.

i) K-IFRS No.1116, *'Leases'*

K-IFRS No.1116, published on May 22, 2017, replaces existing standards including K-IFRS No.1017, *'Leases'*, K-IFRS No.2104, *'Determining whether an Arrangement contains a Lease'*, K-IFRS No.2015, *'Operating Leases - Incentives'* and K-IFRS No.2027, *'Evaluating the Substance of Transactions Involving the Legal Form of a Lease'*.

3. Significant accounting policies (continued)

(aa) New standards and interpretations not yet adopted (continued)

At inception of a contract, an entity shall assess whether the contract is, or contains, a lease. However, as a practical expedient, for the contracts previously identified as leases or not, an entity is not required to reassess whether the contract is, or contains, a lease at the date of initial application.

For a contract that is, or contains, a lease, a lessee or a lessor shall account for each lease component within the contract as a lease separately from non-lease components of the contract.

A lessee shall recognize a right-of-use asset, which indicates an asset that represents a lessee's right to use an underlying asset for the lease term, and a lease liability, which indicates obligation to make lease payments. However, a lessee may elect not to apply the requirements to short-term leases and leases for which the underlying asset is of low value. Also, as a practical expedient, a lessee may elect, by class of underlying asset, not to separate non-lease components from lease components, and instead account for each lease component and any associated non-lease components as a single lease component.

There has not been a material change in the accounting treatments for a lessor from the existing standard K-IFRS No.1017. K-IFRS No.1116 is effective for annual periods beginning on or after January 1, 2019, with earlier application permitted.

ⓐ Transition method of K-IFRS No.1116, *'Lease'*

The lessee is required to apply either retrospective application (full retrospective approach) to each past reporting period presented in accordance with K-IFRS No.1008, *'Accounting Policies, Changes in Accounting Estimates and Errors'* or recognize the cumulative effect of the initial application at the date of initial application (cumulative effect of batch reconciliation action).

The Group plans to apply K-IFRS No.1116 for the first time by applying cumulative effect of the initial application as of January 1, 2019. Accordingly, the cumulative effect of applying K-IFRS No.1116 is adjusted in the retained earnings (or, where appropriate, other components of equity) at the date of initial application and the comparative financial statements are not going to be restated.

ⓑ Financial effect of K-IFRS No.1116, *'Lease'*

The Group assessed the impact on the consolidated financial statements based on the situation and available information as of December 31, 2018, in order to assess the financial impact of the initial adoption of K-IFRS No.1116.

As of December 31, 2018, the aggregate amount of the minimum lease payments prior to the present value discount for the assets currently used as operating leases is approximately ₩519 billion and the discounted amount is approximately ₩505 billion if discounted by the incremental borrowing rate of the lessee. However, the Group will account for each lease element and associated non-lease element as a single lease element, using the simplified method of accounting for contracts that include all or part of the lease.

As a result of a detailed analysis of the effect on the financial statements, the Group expects the right-to-use assets and lease liabilities as of December 31, 2018 to increase by approximately ₩502 billion and approximately ₩461 billion, respectively.

ii) Amendment of K-IFRS No.1109, '*Financial instruments'*

Financial assets that are redeemable with reimbursable financial assets are remeasured to be measured at amortized cost. When the financial liabilities measured at amortized cost are changed but not eliminated, the effect of the change should be recognized in profit or loss. These amendments will be effective from the fiscal year beginning on or after January 1, 2019 and are subject to early adoption.

3. Significant accounting policies (continued)

(aa) New standards and interpretations not yet adopted (continued)

iii) Amendment of K-IFRS No.1019, *'Employee benefits'*

If the change in the defined benefit plan results in the revision, reduction or settlement of the plan, the assumptions used in remeasurement of the net defined benefit obligation (asset) to estimate the current service cost and net interest for the remaining period of the period after the adjustments in the plan. In addition, the decrease in excess of the amount of unrecognized actuarial gain or loss is reflected in profit or loss as a part of past service cost or settlement profit or loss. The amendments are applied prospectively to the amendment, reduction, and settlement of systems that have occurred since the fiscal year beginning on or after January 1, 2019.

iv) Amendment of K-IFRS No.1028, *'Investment in associates and joint ventures'*

The clarification has been conducted that other financial instruments (financial instruments that do not apply the equity method) to the related companies or joint ventures are subject to K-IFRS No.1109, and that the long-term investment interests that form part of the net investment in the related companies or joint ventures was revised accordingly with the K-IFRS No.1109. These amendments will be effective from the fiscal year beginning on or after January 1, 2019 and are subject to early adoption. In addition, the first-time adoption of this standard does not require reclassification of comparative information by applying the transitional provisions of K-IFRS No.1109, and the effect of retroactive application is reflected in the beginning retained earnings (or other appropriate capital elements) at the date of initial application.

v) Establishment of K-IFRS No.2123, *'Uncertainty over income tax treatments'*

The interpretation is applied to the recognition and measurement of deferred tax and deferred income tax if there is uncertainty about whether or not the tax treatment applied by the entity will be recognized by the taxing authority. Guidance on accounting units of uncertainty in taxation and circumstances requiring reevaluation Includes. The interpretation is effective from January 1, 2019, and it can choose between retroactively reclassifying comparative financial statements or reflect the effect of the change on the basis of the first year of adoption.

vi) Annual amendments through year 2015 – 2017

vi-i) K-IFRS No.1103, *'Business combination'*

The business combination that is held in stages to acquire control over the joint business (meeting the definition of the business) while retaining the rights and liabilities for the assets related to the joint business. Therefore, Remeasurement should be conducted for all underlying assets and liabilities. The amendments are effective for annual periods beginning on or after January 1, 2019, or reflect the effect of the change on the basis of the first year of adoption.

vi-ii) K-IFRS No.1012, *'Income taxes'*

The provisions of paragraph 57A of K-IFRS No.1012 (defining the timing and recognition of dividend tax effects) apply to all income tax effects of dividends and are recognized in profit or loss, other comprehensive income or capital. This amendment is effective for fiscal years beginning on or after January 1, 2019, but may be applied early.

3. Significant accounting policies (continued)

(ab) Accounting policies in accordance with K-IFRS No.1039

The following accounting policies are applied to the comparative separate statements of financial position as of December 31, 2017, and the separate statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes.

i) Non-derivative financial assets

Financial assets are classified into financial assets at fair value through profit or loss, loans and receivables, available-for-sale financial assets and held-to-maturity financial assets. Financial assets are recognized when the Group becomes a party to the contractual provisions of the instrument. In addition, a regular way purchase or sale (a purchase or sale of a financial asset under a contract whose terms require delivery of the asset within the time frame established generally by regulation or convention in the market concerned) is recognized on the trade date.

A financial asset is measured initially at its fair value plus, for an item not at fair value through profit or loss, transaction costs that are directly attributable to its acquisition of the financial asset.

ⓐ Financial assets at fair value through profit or loss

A financial asset is classified as at fair value through profit or loss if it is held for trading or is designated at fair value through profit or loss. Upon initial recognition, transaction costs are recognized in profit or loss when incurred. Financial assets at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss.

ⓑ Held-to-maturity financial assets

A non-derivative financial asset with a fixed or determinable payment and fixed maturity, for which the Group has the positive intention and ability to hold to maturity, is classified as held-to-maturity investments. Subsequent to initial recognition, held-to-maturity investments are measured at amortized cost using the effective interest method.

ⓒ Loans and receivables

Loans and receivables are financial assets with fixed or determinable payments that are not quoted in an active market. Subsequent to initial recognition, loans and receivables are measured at amortized cost using the effective interest method.

ⓓ Available-for-sale financial assets

Available-for-sale financial assets are those non-derivative financial assets that are designated as available-for-sale or are not classified as financial assets at fair value through profit or loss, held-to-maturity investments or loans and receivables. Subsequent to initial recognition, they are measured at fair value, which changes in fair value, net of any tax effect, recorded in other comprehensive income in equity. Investments in equity instruments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured and derivatives those are linked to and must be settled by delivery of such unquoted equity instruments are measured at cost.

3. Significant accounting policies (continued)

(ab) Accounting policies in accordance with K-IFRS No.1039 (continued)

ii) Impairment of financial assets

A financial asset not carried at fair value through profit or loss is assessed at each reporting date to determine whether there is objective evidence that it is impaired. A financial asset is impaired if objective evidence indicates that a loss event has occurred after the initial recognition of the asset, and that the loss event had a negative effect on the estimated future cash flows of that asset that can be estimated reliably. However, losses expected as a result of future events, regardless of likelihood, are not recognized.

If any objective evidence of impairment exists, impairment losses should be measured by the following categories of financial assets and recognized in profit or loss.

ⓐ Loans

The Group first assesses whether objective evidence of impairment exists individually for loans that are individually significant, and individually or collectively for financial assets that are not individually significant. If the Group determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is or continues to be recognized are not included in a collective assessment of impairment.

If there is objective evidence that an impairment loss on loans and receivables has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate (i.e., the effective interest rate computed at initial recognition).

If the interest rate of loans is a floating rate, the discount rate used to evaluate impairment is the current effective interest rate defined in the agreement. The present value of estimated future cash flows of secured financial assets is calculated by including cash flows from collateral after deducting costs to acquire and sell the collateral, regardless of probability of realization of such collateral.

In assessing collective impairment, the Group classifies loans, based on credit risk assessment or a credit rating assessment process that takes into account asset type, industry, regional location, collateral type, delinquency and other relative factors.

Future cash flows of loans subject to collective impairment assessment are estimated by using statistical modelling of historical trends of the probability of default, timing of recoveries and the amount of losses incurred, adjusted for management’s judgment as to whether current economic and credit conditions are such that the impairment losses are likely to be greater or less than suggested by historical modelling. In adjusting the future cash flows by historical modelling, the result has to be in line with changes and trends of observable data (e.g., impairment losses of collective assets and unemployment rates, asset prices, commodity prices, payment status and other variables representing the size of impairment losses). Methodologies and assumptions used to estimate future cash flow are reviewed on a regular basis in order to reduce discrepancy between estimated impairment losses and actual loss.

Impairment losses are recognized in profit or loss and reflected in an allowance account against loans. When a subsequent event causes the amount of impairment losses to decrease, and the decrease can be related objectively to an event occurring after the impairment is recognized, the decrease in impairment losses is reversed through profit or loss of the period.

3. Significant accounting policies (continued)

(ab) Accounting policies in accordance with K-IFRS No.1039 (continued)

ⓑ Available-for-sale financial assets

When a decline in the fair value of an available-for-sale financial asset has been recognized in other comprehensive income and there is objective evidence that the asset is impaired, the cumulative loss that had been recognized in other comprehensive income is reclassified from equity to profit or loss as a reclassification adjustment even though the financial asset has not been derecognized. Impairment losses recognized in profit or loss for an investment in an equity instrument classified as available-for-sale are not reversed through profit or loss. If, in a subsequent period, the fair value of a debt instrument classified as available-for-sale increases and the increase can be objectively related to an event occurring after the impairment loss is recognized in profit or loss, the impairment loss is reversed, with the amount of the reversal recognized in profit or loss.

ⓒ Held-to-maturity financial assets

An impairment loss in respect of held-to-maturity financial assets measured at amortized cost is calculated as the difference between its carrying amount and the present value of the estimated future cash flows discounted at the asset's original effective interest rate and is recognized in profit or loss. Interest on the impaired asset continues to be recognized through the unwinding of the discount. When a subsequent event causes the amount of impairment loss to decrease, the decrease in impairment loss is reversed through profit or loss.

iii) Derivative financial instruments

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are accounted for as described below.

ⓐ Hedge Accounting

The Group holds forward exchange contracts, interest rate swaps, currency swaps and other derivative contracts to manage interest rate risk and foreign exchange risk. The Group designated derivatives as hedging instruments to hedge the risk of changes in the fair value of assets, liabilities or firm commitments (a fair value hedge) and foreign currency risk of highly probable forecasted transactions or firm commitments (a cash flow hedge), and foreign currency risk of net investment in foreign operation (net investment hedges).

On initial designation of the hedge, the Group formally documents the relationship between the hedging instrument(s) and hedged item(s), including the risk management objectives and strategy in undertaking the hedge transaction, together with the methods that will be used to assess the effectiveness of the hedging relationship.

ⓑ Fair value hedges

Changes in the fair value of a derivative hedging instrument designated as a fair value hedge are recognized in profit or loss. The gain or loss from remeasuring the hedging instrument at fair value and the gain or loss on the hedged item attributable to the hedged risk are recognized in profit or loss in the same line item of the separate statement of comprehensive income.

The Group discontinues fair value hedge accounting if the hedging instrument expires or is sold, terminated or exercised, or if the hedge no longer meets the criteria for hedge accounting. Any adjustment arising from gain or loss on the hedged item attributable to the hedged risk is amortized to profit or loss from the date the hedge accounting is discontinued.

3. Significant accounting policies (continued)

(y) Accounting policies in accordance with K-IFRS No.1039 (continued)

iii) Derivative financial instruments (continued)

ⓒ Cash flow hedges

When a derivative is designated as the hedging instrument in a hedge of the variability in cash flows attributable to a particular risk associated with a recognized asset or liability or a highly probable forecasted transaction that could affect profit or loss, the effective portion of changes in the fair value of the derivative is recognized in other comprehensive income and presented in the hedging reserve in equity. The amount recognized in other comprehensive income is removed and included in profit or loss in the same period as the hedged cash flows affect profit or loss under the same line item in the separate statements of comprehensive income as the hedged item. Any ineffective portion of changes in the fair value of the derivative is recognized immediately in profit or loss.

If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated, exercised, or the designation is revoked, then hedge accounting is discontinued prospectively. The cumulative gain or loss previously recognized in other comprehensive income and presented in the hedging reserve in equity remains there until the forecasted transaction affects profit or loss. When the hedged item is a non-financial asset, the amount recognized in other comprehensive income is transferred to the carrying amount of the asset when the asset is recognized. If the forecasted transaction is no longer expected to occur, then the balance in other comprehensive income is recognized immediately in profit or loss. In other cases the amount recognized in other comprehensive income is transferred to profit or loss in the same period that the hedged item affects profit or loss.

ⓓ Hedge of net investment

Foreign currency differences arising on the retranslation of a financial liability designated as a hedge of a net investment in a foreign operation are recognized in other comprehensive income to the extent that the hedge is effective. To the extent that the hedge is ineffective, such differences are recognized in profit or loss. When the hedged part of a net investment is disposed of, the relevant amount in the accumulated other comprehensive income is transferred to profit or loss as part of the profit or loss on disposal in accordance with K-IFRS No.1021, *'The Effects of Changes in Foreign Exchange Rates'*.

ⓔ Embedded derivatives

Embedded derivatives are separated from the host contract and accounted for separately only if the economic characteristics and risks of the host contract and the embedded derivative are not closely related; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the combined instrument is not measured at fair value through profit or loss. Changes in the fair value of separable embedded derivatives are recognized immediately in profit or loss.

ⓕ Other derivative financial instruments

Changes in the fair value of other derivative financial instrument not designated as a hedging instrument are recognized immediately in profit or loss.

4. Financial risk management

4-1. Credit risk

Credit risk is the risk of financial loss of the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligation, and arises principally from due from banks, the lending process related to loans, investment activities in debt securities and off balance sheet items including loan commitments, etc. Credit risk management is critical to the Group's business activities; thus, the Group carefully manages the credit risk exposure.

(a) Credit risk management

Major policies of the credit risk management are determined by the Risk Policy Committee, which is the Group's executive decision-making body for credit risk management. The Risk Policy Committee is led by the Group's Deputy President and Head of Risk Management Group. The Risk Policy Committee also consists of chief officers from eight different business units. The Credit Review Committee performs credit review evaluations and operates separately from the Risk Policy Committee.

Each business unit is required to implement the Group's risk management policies and procedures. Risk Management Department reviews compliance of business units with agreed exposure limits established by the Risk Policy Committee, including those for selected industries, country risk and product types.

The Group established the authorization structure for the approval and renewal of credit facilities. Authorization limits are allocated to the business unit credit officer. Larger facilities require approval by the Credit Committee. The Group assesses all credit exposures in excess of designated limits, prior to facilities being committed to customers by the business unit concerned. Renewals and review of facilities are subject to the same review process.

The Group is responsible for limiting concentrations of exposures to counterparties, geographies and industries, and by issuers, credit rating band, market liquidity and country.

The Group develops and maintains the risk grading system in order to categorize exposures according to the degree of risk of financial loss faced and to focus management on the attendant risks. The risk grading system is used in determining credit approvals, credit renewals, credit pricing, credit limits, or where impairment provisions may be required against specific credit exposures for existing loans.

Each business unit is responsible for the quality and performance of its credit portfolio and for monitoring and controlling all credit risks in its portfolio, including those subject to central approval. In addition to periodic loan reviews by credit officers, the Group also utilizes an automated monitoring tool which conducts searches for companies with high probability of default. Regular reports on the credit quality of local portfolios are provided to the Credit Administration Department who may require appropriate corrective action to be taken.

4. Financial risk management (continued)

4-1. Credit risk (continued)

(b) Risk management and risk mitigation policy

In order to control the credit risk of the Group at an appropriate level, the following risk management system is established and operated.

- Credit risk limits are set and managed by business sector, customer, product, industry, etc. based on credit VaR (Value at Risk) and maximum exposure amount.
- The risk department establishes and manages limits for credit VaR, and maximum exposure limits. The credit planning department and the credit assessment department conduct maximum exposure limits.
- The risk engineering department and risk engineering department establishes a credit risk limit operation plan for the entire bank at least once a year, and commits it to the risk policy committee.
- Each business unit monitors and adheres to credit risk limits assigned to each business unit.
- Identify and manage by individual and corporate customers, industry and nationality for identified credit risk.
- Set limits on acceptable risks for individual borrowers or borrowers, and by geographical sectors.
- The risk is reviewed on an annual basis or within a period when it is deemed necessary, and the limits of risks by product, industry and country are approved by the Board on a quarterly basis.
- The maximum amount of exposure by the borrower, including the institution, is managed separately by the lower level limit for the accounts in the consolidated financial statements and the other accounts, and the limit of the risk is also determined for daily transactions related to commodity transactions such as foreign currency forward transactions.
- Actual maximum exposure limits is managed on a daily basis.
- Maximum credit risk exposure is managed in the process of analyzing the interest and principal repayment ability of the borrower, and if necessary, changes the loan limit in the process.

Other risk management measures are as follows.

i) Collateral

The Group has adopted policies and procedures to mitigate credit risk. In connection with credit risk, collateral is generally used, and the Group has adopted a policy for pledging certain types of assets. The main types of collateral are as follows:
- Mortgage
- Real estate, inventories, accounts receivable, etc.
- Financial instruments such as debt securities and equity securities

Long-term loans are generally collateralized. On the other hand, revolving personal loans are generally unsecured. In addition, in order to minimize losses due to credit risk, the Group establishes additional collateral for the counterparty in the event of an indication of impairment of the asset.

Collateral for financial assets other than loans is subject to the nature of the products. Except for special cases such as Asset Backed Securities (ABS), unsecured securities are common in the case of debt securities.

ii) Derivative financial instruments

The Group maintains a credit limit on the amount and duration of derivative financial instruments that are in between the disposal agreements after purchase.

4. Financial risk management (continued)

4-1. Credit risk (continued)

iii) Collective offsetting contracts

The Group limits its maximum exposure to credit losses by engaging in collective offsetting contracts with counterparties in performing significant number of transactions.

Collective offsetting contracts generally do not result from offsetting assets and liabilities in the consolidated financial statements, as transactions are usually set at a gross amount basis. However, when all amounts to the counterparty are set on a net basis, the credit risk associated with a favorable contract is reduced by collective offsetting contracts if losses are incurred.

The Group's overall maximum exposure to credit risk that is part of a collective offsetting contract can vary substantially within a short period of time because it is affected by each transaction.

iv) Credit related contracts

Warranties and credit guarantees have credit risks similar to credit. Credit (which guarantees credit on behalf of the customer by issuing a note to a third party for the amount requested under specific terms and conditions) is secured by the underlying commodities associated with them, it involves less risk. The credit enhancement arrangements represent the unused portion of the credit limit in the form of a credit, guarantee or letter of credit. In relation to the credit risk of a credit enhancement arrangement, the Group is potentially exposed to the same amount as the total unused arrangements. Long-term contracts generally have a greater degree of credit risk than short-term, and the Group monitors the maturity of credit arrangements.

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model)

i) Determining significant increases in credit risk since initial recognition

At each reporting date, the Group assesses whether the credit risk on a financial instrument has increased significantly since initial recognition. When making the assessment, the Group uses the change in the risk of a default occurring over the expected life of the financial instrument instead of the change in the amount of expected credit losses. To make that assessment, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition and consider reasonable and supportable information, that is available without undue cost or effort, that is indicative of significant increases in credit risk since initial recognition. The supportable information also includes historical default data held by the Group and the analysis by internal credit risk rating specialists.

ⓐ Measuring the risk of default

The Group assigns an internal credit risk rating to each individual exposure based on observable data and historical experiences that have been found to have a reasonable correlation with the risk of default. The internal credit risk rating is determined by considering both qualitative and quantitative factors that indicate the risk of default, which may vary depending on the nature of the exposure and the type of borrower.

The internal credit risk rating based on the borrower's information related to each individual exposures on initial recognition, may change depending on the results of continuing monitoring and reviews.

4. Financial risk management (continued)

4-1. Credit risk (continued)

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model) (continued)

ⓑ Measuring term structure of probability of default

The Group accumulates information after analyzing the information regarding exposure to credit risk and default information by the type of product and borrower and results of internal credit risk assessment. For some portfolios, the Group uses information obtained from external credit rating agencies when performing these analyses.

The Group applies statistical techniques to estimate the probability of default for the remaining life of the exposure from the accumulated data and to estimate changes in the estimated probability of default over time.

ⓒ Significant increases in credit risk

The Group uses the indicators defined as per portfolio to determine the significant increase in credit risk and such indicators generally consist of changes in the risk of default estimated from changes in the internal credit risk rating, qualitative factors, days of delinquency, and others. The method used to determine whether credit risk of financial instruments has significantly increased after the initial recognitions is summarized as follows:

Corporate exposures	Retail exposures
Significant change in credit ratings	Significant change in credit ratings
Continued past due more than 30 days	Continued past due more than 30 days
Loan classification of precautionary and below	Loan classification of precautionary and below
Borrower with early warning signals	Borrower with early warning signals
Negative net assets	Specific pool segment
Adverse audit opinion or disclaimer of opinion	Collective loans for housing for which the constructors are insolvent
Interest coverage ratios of below 1 for consecutive three years	
Negative cash flows from operating activities for consecutive two years	

The Group considers the credit risk of financial instrument has been significantly increased since initial recognition if a specific exposure is past due more than 30 days (however, for a specific portfolio if it is past due more than 7 days). The Group counts the number of days past due from the earliest date on which the Group has not received the contractual payments in full from the borrower and does not consider the grace period granted to the borrower.

The Group regularly reviews the criteria for determining if there have been significant increases in credit risk from the following perspective.
- A significant increase in credit risk shall be identified prior to the occurrence of default.
- The criteria established to judge the significant increase in credit risk shall have a more predictive power than the criteria for days of delinquency.
- As a result of applying the judgment criteria, financial instruments shall not be to move too frequently between the 12-months expected credit losses measurement and the lifetime expected credit losses measurement.

4. Financial risk management (continued)

4-1. Credit risk (continued)

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model) (continued)

ii) Modified financial assets

If the contractual cash flows on a financial asset have been renegotiated or modified and the financial asset was not derecognized, the Group assesses whether there has been a significant increase in the credit risk of the financial instrument by comparing the risk of a default occurring at initial recognition based on the original, unmodified contractual terms and the risk of a default occurring at the reporting date based on the modified contractual terms.

The Group may adjust the contractual cash flows of loans to customers who are in financial difficulties in order to manage the risk of default and enhance the collectability (hereinafter referred to as 'debt restructuring'). These adjustments generally involve extension of maturity, changes in interest payment schedule, and changes in other contractual terms.

Debt restructuring is a qualitative indicator of a significant increase in credit risk and the Group recognizes lifetime expected credit losses for the exposure expected to be the subject of such adjustments. If a borrower faithfully makes payments of contractual cash flows that were modified in accordance with the debt restructuring or if the borrower's internal credit rating has recovered to the level prior to the recognition of the lifetime expected credit losses, the Group recognizes the 12-months expected credit losses for that exposure again.

iii) Risk of default

The Group considers a financial asset to be in default if it meets one or more of the following conditions:
- if a borrower is overdue 90 days or more from the contractual payment date,
- if the Group judges that it is not possible to recover principal and interest without enforcing the collateral on a financial asset

The Group uses the following indicators when determining whether a borrower is in default:
- qualitative factors (e.g. breach of contract terms),
- quantitative factors (e.g. if the same borrower does not perform more than one payment obligations to the Group, the number of days past due per payment obligation. However, in the case of a specific portfolio, the Group uses the number of days past due for each financial instrument)
- internal data and external data

The definition of default applied by the Group generally conforms to the definition of default defined for regulatory capital management purposes; however, depending on the situations, the information used to determine whether a default has incurred and the extent thereof may vary.

iv) Reflection of forward-looking information

The Group reflects forward-looking information presented by internal experts based on a variety of sources when measuring expected credit losses. For the purpose of estimating these forward-looking information, the Group utilizes the economic outlook published by domestic and overseas research institutes or government and public agencies.

4. Financial risk management (continued)

4-1. Credit risk (continued)

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model) (continued)

The Group reflects future macroeconomic conditions anticipated from a neutral standpoint that is free from bias in measuring expected credit losses. Expected credit losses in this respect reflect conditions that are most likely to occur and are based on the same assumptions that the Group used in its business plan and management strategy.

The Group identified the key macroeconomic variables relevant to forecast credit risk and credit losses for each portfolio as follows by analyzing past experience data and drew correlations across credit risk for each variable.

Key macroeconomic variables	Correlation with credit risk
Economic growth	Negative
Consumer price change rates	Positive
Benchmark rate	Positive
3-year Korea Treasury Bond	Positive
3-year Corporate Bond	Positive
KOSPI	Negative

The predicted correlations between the macroeconomic variables and the risk of default, used by the Group, were derived based on data from the past nine years.

v) Measurement of expected credit losses

Key variables used in measuring expected credit losses are as follows:

- Probability of default (PD)
- Loss given default (LGD)
- Exposure at default (EAD)

These variables have been estimated from historical experience data by using the statistical techniques developed internally by the Group and have been adjusted to reflect forward-looking information.

Estimates of PD over a specified period are estimated by reflecting characteristics of counterparties and their exposure, based on a statistical model at a specific point of time. The Group uses its own information to develop a statistical credit assessment model used for the estimation, and additional information observed in the market is considered for some portfolios such as a group of large corporates. When a counterparty or exposure is concentrated in specific grades, the method of measuring PD for that grades would be adjusted, and the PD by grade is estimated by considering contract expiration of the exposure.

LGD refers to the expected loss if a borrower defaults. The Group calculates LGD based on the experience recovery rate measured from past default exposures. The model for measuring LGD is developed to reflect type of collateral, seniority of collateral, type of borrower, and cost of recovery. In particular, LGD for retail loan products uses loan to value (LTV) as a key variable. The recovery rate reflected in the LGD calculation is based on the present value of recovery amount, discounted at the effective interest rate.

EAD refers to the expected exposure at the time of default. The Group derives EAD reflecting a rate at which the current exposure is expected to be used additionally up to the point of default within the contractual limit. EAD of financial assets is equal to the total carrying amount of the asset, and EAD of loan commitments or financial guarantee contracts is calculated as the sum of the amount expected to be used in the future.

4. Financial risk management (continued)

4-1. Credit risk (continued)

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model) (continued)

When measuring expected credit losses on financial assets, the Group reflects a period of expected credit loss measurement based on a contractual maturity. The Group takes into consideration of the extension rights held by a borrower when deciding the contractual maturity.

Risk factors such as PD, LGD and EAD are collectively estimated according to the following criteria:
- Type of products
- Internal credit risk rating
- Type of collateral
- Loan to value (LTV)
- Industry that the borrower belongs to
- Location of the borrower or collateral
- Days of delinquency

The criteria for classification of groups are periodically reviewed to maintain homogeneity of the group and adjusted if necessary. The Group uses external benchmark information to supplement internal information for a particular portfolio that did not have sufficient internal data accumulated from the past experience.

vi) Write-off of financial assets

The Group writes off a portion of or entire loan or debt security that is not expected to receive its principal and interest. In general, the Group conducts write-off when it is deemed that the borrower has no sufficient resources or income to repay the principal and interest. Such determination on write-off is carried out in accordance with the internal rules of the Group and is carried out with the approval of an external institution, if necessary. Apart from write-off, the Group may continue to exercise its right of collection under its own recovery policy even after the write-off of financial assets.

(In millions of won)

4. Financial risk management (continued)

4-1. Credit risk (continued)

(d) Maximum exposure to credit risk

The Group's maximum exposure to credit risk without taking account of any collateral held or other credit enhancements as of December 31, 2018 and 2017 were as follows:

		December 31, 2018
Due from banks (*1)(*2):		
Banks	₩	5,155,564
Governments		5,425,800
		10,581,364
Loans at amortized cost (*1)(*2):		
Banks		8,725,756
Retail:		
Mortgage lending		49,114,592
Others		76,271,127
		125,385,719
Governments		690,658
Corporate		
Large enterprises		32,548,577
Small and medium-sized enterprises		78,817,756
Special finance		4,965,619
Others		941
		116,332,893
Credit cards		98,780
		251,233,806
Loans at FVTPL:		
Banks		20,004
Corporate		
Large enterprises		319,918
Small and medium-sized enterprises		305,315
		625,233
		645,237
Securities at FVTPL:		
Debt securities		15,334,231
Gold/silver deposits		154,881
		15,489,112
Securities at FVOCI (*1)		31,435,546
Securities at amortized cost (*1)		16,824,400
Derivative assets		1,484,458
Other financial assets (*1)(*3)		14,200,801
Off balance sheet items:		
Financial guarantee contracts		4,391,207
Loan commitments and other liabilities for credit		91,002,891
		95,394,098
	₩	437,288,822

(*1) The maximum exposure amounts for due from banks and loans and other financial assets are measured as the amount net of allowances.
(*2) Due from banks and loans were classified as similar credit risk group to be with consistent calculating capital adequacy ratio under New Basel Capital Accord (Basel III).
(*3) Other financial assets comprise accounts receivable, accrued income, guarantee deposits, domestic exchange settlements receivables, suspense receivables, etc.

(In millions of won)

4. Financial risk management (continued)

4-1. Credit risk (continued)

(d) Maximum exposure to credit risk (continued)

		December 31, 2017
Due from banks and loans (*1)(*2):		
Banks	₩	9,826,462
Retail:		
Mortgage lending		48,690,383
Others		65,913,610
		114,603,993
Governments		14,125,100
Corporate:		
Large enterprises		32,746,281
Small and medium-sized enterprises		73,184,008
Special finance		4,076,599
Others		465
		110,007,353
Credit cards		81,673
		248,644,581
Trading assets:		
Debt securities		10,506,358
Gold/silver deposits		189,297
		10,695,655
Derivative assets		2,604,090
Available-for-sale financial assets:		
Debt securities		29,959,169
Held-to-maturity financial assets:		
Debt securities		14,822,898
Other financial assets (*1)(*3)		9,080,904
Off balance sheet items:		
Financial guarantee contracts		3,242,514
Loan commitments and other liabilities for credit		73,790,861
		77,033,375
	₩	392,840,672

(*1) The maximum exposure amounts for due from banks and loans and other financial assets are measured as the amount net of allowances.
(*2) Due from banks and loans were classified as similar credit risk group to be with consistent calculating capital adequacy ratio under New Basel Capital Accord (Basel III).
(*3) Other financial assets comprise accounts receivable, accrued income, guarantee deposits, domestic exchange settlements receivables, suspense receivables, etc.

(In millions of won)

4. Financial risk management (continued)

4-1. Credit risk (continued)

(e) Credit risk exposure by credit risk grade

i) The maximum exposure of financial instruments to credit risk by credit risk grade as of December 31, 2018 was as follows:

	12-month expected loss		Life time expected loss						
	Grade 1 (*2)	Grade 2 (*2)	Grade 1 (*2)	Grade 2 (*2)	Impaired	Total	Allowances	Net	Mitigation of credit risk due to collateral
Due from banks:									
Banks	₩ 5,162,123	-	3,816	-	-	5,165,939	(10,375)	5,155,564	-
Governments	5,430,210	-	-	-	-	5,430,210	(4,410)	5,425,800	-
	10,592,333	-	3,816	-	-	10,596,149	(14,785)	10,581,364	-
Loans at amortized cost:									
Banks	7,715,882	921,256	91,050	11,494	-	8,739,682	(13,926)	8,725,756	54,903
Retail	113,520,487	4,138,405	4,853,910	2,897,946	340,159	125,750,907	(365,188)	125,385,719	75,022,341
Governments	688,758	2,399	-	-	-	691,157	(499)	690,658	-
Corporate	73,508,663	22,812,566	9,529,058	11,000,465	773,440	117,624,192	(1,291,299)	116,332,893	66,769,705
Credit cards	19	100,172	2	2,318	1,069	103,580	(4,800)	98,780	548
	195,433,809	27,974,798	14,474,020	13,912,223	1,114,668	252,909,518	(1,675,712)	251,233,806	141,847,497
Securities at FVOCI (*1)	24,490,856	6,838,860	-	105,830	-	31,435,546	-	31,435,546	-
Securities at amortized cost	16,006,518	800,172	22,474	-	-	16,829,164	(4,764)	16,824,400	-
	₩ 246,523,516	35,613,830	14,500,310	14,018,053	1,114,668	311,770,377	(1,695,261)	310,075,116	141,847,497

(*1) Provision for credit loss allowance recognized in other comprehensive income on securities at FVOCI is ₩20,564 million.
(*2) Credit quality of due from banks and loans was classified based on the internal credit rating as follows:

Type of borrowers	Grade 1	Grade 2
Banks and Governments	OECD sovereign credit rating of 6 or above (as applied to the nationalities of the banks and governments)	OECD sovereign credit rating of below 6 (as applied to the nationalities of the banks and governments)
Retail	Pool of retail loans with probability of default of less than 2.25%	Pool of retail loans with probability of default of 2.25% or more
Corporate (loans and credit cards)	Internal credit rating of BBB+ or above	Internal credit rating of below BBB+
Credit cards (individuals)	For individual credit card holders, score of 7 or higher in Shinhan Card's internal behavior scoring system	For individual credit card holders, score of below 7 in Shinhan Card's internal behavior scoring system

(In millions of won)

4. Financial risk management (continued)

4-1. Credit risk (continued)

(e) Credit risk exposure by credit risk grade (continued)

ii) Credit risk exposure per credit grade of off balance sheet items as of December 31, 2018 was as follows:

		December 31, 2018			
		12-month expected credit loss	Life time expected credit loss	Impaired	Total
Financial guarantee:					
Grade 1	₩	2,117,330	144,396	-	2,261,726
Grade 2		1,975,530	152,162	-	2,127,692
Impaired		-	-	1,789	1,789
		4,092,860	296,558	1,789	4,391,207
Loan commitment and other credit line					
Grade 1		69,820,060	2,995,450	-	72,815,510
Grade 2		16,931,240	1,256,141	-	18,187,381
		86,751,300	4,251,591	-	91,002,891
	₩	90,844,160	4,548,149	1,789	95,394,098

(In millions of won)

4. Financial risk management (continued)

4-1. Credit risk (continued)

(e) Credit risk exposure by credit risk grade (continued)

iii) Credit risk exposure per collateral of financial instruments as of December 31, 2018 was as follows:

		December 31, 2018			
		12-month expected credit loss	Life time expected credit loss	Impaired	Total
Guarantees	₩	12,805,907	3,827,687	50,198	16,683,792
Deposits and savings		761,631	222,692	677	985,000
Property and equipment		1,051,573	244,571	18,766	1,314,910
Real estate		113,055,399	13,530,936	256,917	126,843,252
	₩	127,674,510	17,825,886	326,558	145,826,954

iv) Credit risk exposure per LTV of mortgage loans as of December 31, 2018 was as follows:

		December 31, 2018					
		40% or less	Above 40% ~ 60%	Above 60% ~ 80%	Above 80% ~ 100%	Other	Total
Loans at amortized cost	₩	16,867,813	15,050,255	13,489,872	3,126,966	601,275	49,136,181
Less: allowance		(1,321)	(2,208)	(6,340)	(5,715)	(6,005)	(21,589)
	₩	16,866,492	15,048,047	13,483,532	3,121,251	595,270	49,114,592

v) Due from banks and loans as of December 31, 2017 was as follows:

		December 31, 2017					
		Banks	Retail	Governments	Corporate	Credit cards	Total
Neither past due nor impaired	₩	9,843,616	114,227,036	14,129,002	110,033,944	80,660	248,314,258
Past due but not impaired		-	451,639	-	176,579	6,925	635,143
Impaired		-	318,741	-	897,009	33	1,215,783
		9,843,616	114,997,416	14,129,002	111,107,532	87,618	250,165,184
Less: allowance		(17,154)	(393,423)	(3,902)	(1,100,179)	(5,945)	(1,520,603)
	₩	9,826,462	114,603,993	14,125,100	110,007,353	81,673	248,644,581

(In millions of won)

4. Financial risk management (continued)

4-1. Credit risk (continued)

(e) Credit risk exposure by credit risk grade (continued)

vi) Credit quality of due from banks and loans that were neither past due nor impaired as of December 31, 2017 was as follows:

		December 31, 2017					
		Banks	Retail	Governments	Corporate	Credit cards	Total
Grade 1	₩	9,838,259	108,181,667	14,129,002	78,894,110	71,233	211,114,271
Grade 2		5,357	6,045,369	-	31,139,834	9,427	37,199,987
		9,843,616	114,227,036	14,129,002	110,033,944	80,660	248,314,258
Less: allowance		(17,154)	(196,716)	(3,902)	(566,569)	(5,945)	(790,286)
	₩	9,826,462	114,030,320	14,125,100	109,467,375	74,715	247,523,972
Mitigation of credit risk due to collateral	₩	96,660	74,797,088	-	57,116,428	258	132,010,434

vii) Aging analysis of due from banks and loans, that were past due but not impaired as of December 31, 2017 was as follows:

		December 31, 2017			
		Retail	Corporate	Credit cards	Total
Less than 30 days	₩	344,006	118,520	6,431	468,957
30 days ~ less than 60 days		54,305	30,418	66	84,789
60 days ~ less than 90 days		37,898	15,854	38	53,790
90 days or more		15,430	11,787	390	27,607
		451,639	176,579	6,925	635,143
Less: allowance		(50,863)	(8,219)	-	(59,082)
	₩	400,776	168,360	6,925	576,061
Mitigation of credit risk due to collateral	₩	318,660	89,618	2	408,280

(In millions of won)

4. Financial risk management (continued)

4-1. Credit risk (continued)

(e) Credit risk exposure by credit risk grade (continued)

viii) Mitigation of credit risk due to the collateral of impaired due from banks and loans, net of allowance, as of December 31, 2017 was as follows:

		December 31, 2017			
		Retail	Corporate	Credit cards	Total
Impaired	₩	318,741	897,009	33	1,215,783
Less: allowance		(145,844)	(525,391)	-	(671,235)
	₩	172,897	371,618	33	544,548
Mitigation of credit risk due to collateral	₩	122,150	327,418	-	449,568

ix) Credit ratings of debt securities as of December 31, 2017 was as follows:

		December 31, 2017			
		Trading assets	Available-for-sale financial assets	Held-to-maturity financial assets	Total
AAA	₩	3,065,304	21,826,000	13,813,452	38,704,756
AA- to AA+		1,187,091	3,113,596	346,953	4,647,640
A- to A+		3,348,546	2,037,692	130,293	5,516,531
BBB- to BBB+		839,249	1,171,960	166,906	2,178,115
Lower than BBB-		47,981	421,016	177,840	646,837
Unrated		2,018,187	1,388,905	187,454	3,594,546
	₩	10,506,358	29,959,169	14,822,898	55,288,425

x) The credit quality of debt securities according to the credit ratings by external rating agencies as of December 31, 2017 was as follows:

	KIS (*1)	KR (*2)	S&P	Fitch	Moody's
AAA	-	-	AAA	AAA	Aaa
AA- to AA+	AAA	AAA	AA- to AA+	AA- to AA+	Aa3 to Aa1
A- to A+	AA- to AA+	AA- to AA+	A- to A+	A- to A+	A3 to A1
BBB- to BBB+	BBB- to A	BBB- to A	BBB- to BBB+	BBB- to BBB+	Baa3 to Baa1
Lower than BBB-	Lower than BBB-	Lower than BBB-	Lower than BBB-	Lower than BBB-	Lower than Baa3
Unrated	Unrated	Unrated	Unrated	Unrated	Unrated

(*1) KIS: Korea Investors Service
(*2) KR: Korea Ratings

xi) Information related to impairment for debt securities as of December 31, 2017 was as follows:

		December 31, 2017
Neither past due nor impaired	₩	55,288,425

(In millions of won)

4. Financial risk management (continued)

4-1. Credit risk (continued)

(f) Nature and effect of modification in contractual cash flows

i) For the financial assets for which the loss allowances have been measured at amounts equal to the lifetime credit losses, and the contractual cash flows were modified during year ended December 31, 2018, the amortized costs before modification amounted to ₩45,178 million and the net losses resulting from the modification amounted to ₩14,953 million.

ii) As of December 31, 2018, the book value of financial asset, for which contractual cash flows have been modified while the loss allowance was measured at an amount equal to lifetime expected credit losses at initial recognition, and the loss allowance reverted to being measured at an amount equal to 12-month expected credit losses during the year ended December 31, 2018, is ₩1,159 million.

(g) The contractual amounts outstanding on financial assets that were written-off but were still subject to enforcement activity as of December 31, 2018, were ₩6,043,744 million.

(h) As of December 31, 2018 and 2017, there were no assets acquired by the execution of collateral.

(i) Concentration by geographic location

An analysis of concentration by geographic location for financial assets excluding equity securities, net of allowance, as of December 31, 2018 and 2017 were as follows:

		December 31, 2018						
		Korea	U.S.A	Japan	Vietnam	China	Other	Total
Due from banks: (*)								
Banks	₩	222,634	1,478,810	454,277	294,466	2,006,399	698,978	5,155,564
Governments		3,168,858	499,742	750,676	182,822	546,597	277,105	5,425,800
		3,391,492	1,978,553	1,204,953	477,288	2,552,996	976,082	10,581,364
Loans at amortized cost:								
Banks		5,180,244	15,360	186,618	627,411	1,215,043	1,501,080	8,725,756
Retail		118,927,400	358,470	3,440,600	1,031,270	971,159	656,820	125,385,719
Governments		688,261	-	-	-	-	2,397	690,658
Corporate		101,731,466	2,473,910	2,526,494	1,846,468	2,621,580	5,132,975	116,332,893
Credit cards		4,450	1,247	23	92,287	16	757	98,780
		226,531,821	2,848,987	6,153,735	3,597,436	4,807,798	7,294,029	251,233,806
							-	
Loans at FVTPL		645,237	-	-	-	-	-	645,237
Securities at FVTPL		15,063,058	53,863	27,064	-	88,297	256,830	15,489,112
Securities at FVOCI		29,020,711	646,873	197,234	392,668	616,143	561,917	31,435,546
Securities at amortized cost		16,081,956	24,689	68,594	360,953	34,923	253,285	16,824,400
	₩	290,734,275	5,552,964	7,651,580	4,828,345	8,100,157	9,342,144	326,209,465

		December 31, 2017						
		Korea	U.S.A	Japan	Vietnam	China	Other	Total
Due from banks and loans: (*)								
Banks	₩	2,890,736	1,152,093	268,533	547,462	3,420,224	1,547,414	9,826,462
Retail		109,733,109	345,530	2,695,853	745,705	613,134	470,662	114,603,993
Governments		12,569,884	130,553	388,142	35,786	664,030	336,705	14,125,100
Corporate		97,068,853	2,140,109	2,130,721	1,596,579	2,530,295	4,540,796	110,007,353
Credit cards		3,751	859	60	76,194	18	791	81,673
		222,266,333	3,769,144	5,483,309	3,001,726	7,227,701	6,896,368	248,644,581
Trading assets		10,476,869	-	-	-	29,489	189,297	10,695,655
Available-for-sale financial assets		27,916,554	447,804	163,652	474,134	510,678	446,347	29,959,169
Held-to-maturity financial assets		14,273,306	31,988	34,487	237,641	37,096	208,380	14,822,898
	₩	274,933,062	4,248,936	5,681,448	3,713,501	7,804,964	7,740,392	304,122,303

(*) Geographical breakdown is the net book value, net of unrecognized balances and allowance for doubtful accounts.

(In millions of won)

4. Financial risk management (continued)

4-1. Credit risk (continued)

(j) Concentration by industry sector

An analysis of concentration by industry sector for financial assets excluding equity securities, net of allowance, as of December 31, 2018 and 2017 were as follows:

	December 31, 2018						
	Finance and insurance	Manu-facturing	Retail and wholesale	Real estate and service	Others	Retail customers	Total
Due from banks:(*1)							
Banks	₩ 5,155,564	-	-	-	-	-	5,155,564
Governments	5,425,800	-	-	-	-	-	5,425,800
	10,581,364	-	-	-	-	-	10,581,364
Loans at amortized cost:							
Banks	8,369,039	2,219	-	300	354,198	-	8,725,756
Retail	-	-	-	-	-	125,385,719	125,385,719
Governments	690,658	-	-	-	-	-	690,658
Corporate	4,618,663	42,921,485	16,119,877	22,832,074	29,840,794	-	116,332,893
Credit cards	-	-	-	-	-	98,780	98,780
	13,678,360	42,923,704	16,119,877	22,832,374	30,194,992	125,484,499	251,233,806
					-		
Loans at FVTPL	62,005	178,827	208,633	20,004	175,768	-	645,237
Securities at FVTPL	10,749,389	824,042	1,032,448	124,471	2,758,762	-	15,489,112
Securities at FVOCI	19,383,586	1,468,235	242,857	332,101	10,008,767	-	31,435,546
Securities at amortized cost	4,630,825	99,437	-	61,275	12,032,863	-	16,824,400
	₩ 59,085,529	45,494,245	17,603,815	23,370,225	55,171,152	125,484,499	326,209,465

	December 31, 2017						
	Finance and insurance	Manu-facturing	Retail and wholesale	Real estate and service	Others	Retail customers	Total
Due from banks and loans: (*1)							
Banks	₩ 7,610,214	1,592	-	56,744	2,157,912	-	9,826,462
Retail	-	-	-	-	-	114,603,993	114,603,993
Governments	13,192,733	1,314	-	-	931,053	-	14,125,100
Corporate	3,160,611	39,462,251	15,384,000	18,943,931	33,056,560	-	110,007,353
Credit cards	-	-	-	-	-	81,673	81,673
	23,963,558	39,465,157	15,384,000	19,000,675	36,145,525	114,685,666	248,644,581
Trading assets	7,148,494	603,241	1,078,705	93,040	1,772,175	-	10,695,655
Available-for-sale financial assets	20,024,919	1,057,244	164,779	455,014	8,257,213	-	29,959,169
Held-to-maturity financial assets	4,491,644	48,981	-	62,129	10,220,144	-	14,822,898
	₩ 55,628,615	41,174,623	16,627,484	19,610,858	56,395,057	114,685,666	304,122,303

(*) Industrial breakdown is the net book value, net of unrecognized balances and allowance for doubtful accounts.

4. Financial risk management (continued)

4-2. Market risk

Market risk is the risk that changes in market price such as interest rates, equity prices, and foreign exchange rates, etc. will affect the Group's income. Trading position is exposed to the risk such as interest rates, equity prices, foreign exchange rates, etc., and non-trading position is mainly exposed to interest rates. The Group separates and manages its exposure to market risk between trading and non-trading position.

Overall authority for market risk is vested in the Risk Policy Committee. The Risk Management Department is responsible for the development of detailed risk management policies which are subject to review and approval by the Risk Policy Committee and for the day-to-day review of their implementation. The Risk Policy Committee also sets Value at Risk (VaR) limit, damage limit, sensitivity limit, investment limits, position limits, and stress damage limits of each department and desk. The Risk Management Department monitors operation departments and reports regularly to the Risk Policy Committee and the Risk Management Committee.

Before launching a new product from each business unit, the Group is required to perform an objective analysis of the risk evaluation and examination of fair value measurement method from the Risk Management Department or Fair Value Evaluation Committee. The Derivative and Structured Product Risk Review Committee reviews the related risk exposure and investment limit.

(a) Market risk management of trading positions

Trading position includes securities, foreign exchange position, and derivatives which are traded for profits.

Trading data of foreign exchange, stocks, bonds and derivatives from trading positions are tracked and daily risk limits are systematically monitored based on the Group's risk management parameters. Statistical analysis that complements the above risk management process and stress testing is performed regularly in order to manage the impact and loss of rapid economic changes. These risk management processes enable the Group to manage the scale of potential losses within a certain range when a crisis occurs.

i) Measurement method on market risk arising from trading positions

The principal tool used to measure and control market risk exposure within the Group's trading position is VaR. The VaR of a trading position is the estimated loss that will arise on the portfolio over a specified period of time (ten days holding period) from an adverse market movement with a specified probability (confidence level). The Group measures market risk based on 99.9% confidence level by using the VaR model based on historical simulation.

VaR is a commonly used market risk management technique. However, VaR estimates possible losses over a certain period at a particular confidence level using the historical market movement data. The use of historical market movement data as a basis for determining the possible range of future outcome may not always cover all possible scenarios, especially those of an exceptional nature. VaR models assume that a holding period of generally one to ten days is sufficient prior to liquidating the underlying positions, but this may not be the case for certain highly illiquid assets or in situations in which there is severe general market illiquidity.

(In millions of won)

4. Financial risk management (continued)

4-2. Market risk (continued)

(a) Market risk management of trading positions (continued)

The Group directly applies the historical changes in interest rates, equity prices, and foreign exchange rates to current position. The actual outputs are regularly monitored by testing the effectiveness of assumptions, measurements and parameter. The application of this method does not prevent loss from larger market movement that exceeds the acceptable parameter.

VaR limit related to the operation of trading and non-trading portfolio is determined by management annually. VaR is measured at least daily. The quality of VaR model is monitored consistently by examining the VaR results related to trading book.

ii) VaR of trading positions

An analysis of trading position VaR for the years ended December 31, 2018 and 2017 were as follows:

		2018			
		Average	Maximum	Minimum	Year-end
Interest rate risk	₩	22,559	29,748	16,194	18,797
Equity risk		12,118	25,701	1,976	22,212
Foreign currency risk (*1)		39,282	45,738	34,162	34,294
Volatility risk		131	511	30	261
Commodity risk		17	61	-	24
Covariance		(30,150)	(44,297)	(14,337)	(21,298)
	₩	43,957	57,462	38,025	54,290

		2017			
		Average	Maximum	Minimum	Year-end
Interest rate risk	₩	38,370	50,206	22,226	25,071
Equity risk		4,051	5,622	3,040	4,675
Foreign currency risk (*1)		43,827	46,108	41,562	41,947
Volatility risk		70	124	43	66
Commodity risk		22	46	-	14
Covariance		(36,397)	(46,003)	(24,840)	(26,367)
	₩	49,943	56,103	42,031	45,406

(*1) The Group measured foreign currency risk arising from trading positions and non-trading positions.

(In millions of won)

4. Financial risk management (continued)

4-2. Market risk (continued)

(b) Market risk management of non-trading positions

The most critical market risk that arises from non-trading position is the interest rate risk. Accordingly, the Group measures and manages market risk for non-trading position by taking into account effects of interest rate changes on both its net asset value and income. Interest rate risk is the risk of loss from fluctuations in the future cash flows or fair values of financial instruments because of a change in market interest rates.

Interest rate risk is managed principally through monitoring interest rate gaps and by having pre-approved limits for repricing bands. The Risk Policy Committee is the monitoring body for compliance with these limits including establishing policies and setting the limits and is assisted by the Risk Management Department in its day-to-day monitoring activities.

The Group measures and manages interest rate risk by using various analyses such as interest rate gap, duration gap, and NII (Net Interest Income) simulation of each scenario through the ALM system (OFSA). The Group also monitors interest rate VaR, earnings at risk (“EaR”), and gap rate of interest rate by setting the limits on a monthly basis.

i) Measurement method on market risk arising from non-trading positions

The Group measures interest rate VaR by using standard modified duration and interest rate volatility, and interest rate EaR by using impact period by maturity period and interest rate volatility based on a standard methodology provided by the Bank for International Settlements (“BIS”).

ii) Interest rate VaR and EaR for non-trading positions

Interest rate VaR and EaR for non-trading positions which were measured by the standard methodology provided by BIS as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Interest rate VaR	₩	301,152	429,241
Interest rate EaR		371,682	174,262

(In millions of won)

4. Financial risk management (continued)

4-2. Market risk (continued)

(c) Foreign exchange risk

The Group manages foreign currency risk based on general positions which includes all spot and future foreign currency positions, etc. The Risk Policy Committee oversees the Group's foreign exchange exposure for both trading and non-trading activities by establishing limits for the net foreign currencies open position. The Group's foreign exchange position is centralized at the FX & Derivatives Department. Dealers in the FX & Derivatives Department manage the Group's overall position within the set limits through spot trading, forward contracts, currency options, futures and swaps and foreign exchange swaps. The Group's foreign exchange transactions are mainly conducted in the U.S. dollar (USD), Japanese yen (JPY), euro (EUR) and Chinese yuan (CNY). Other foreign currencies are limitedly traded.

Foreign currency denominated assets and liabilities as of December 31, 2018 and 2017 were as follows:

		December 31, 2018					
		USD	JPY	EUR	CNY	Others	Total
Assets							
Cash and due from banks	₩	3,982,259	1,189,532	198,332	1,582,092	1,472,817	8,425,032
Securities at FVTPL		410,497	-	37,184	-	169,810	617,491
Derivative assets		111,036	285	2,299	406	11,875	125,901
Loans at amortized cost		15,522,744	6,859,420	1,275,174	3,496,937	5,934,618	33,088,893
Securities at FVOCI		2,628,613	125,512	-	357,682	696,230	3,808,037
Securities at amortized cost		116,333	128,512	-	34,955	617,648	897,448
Other financial assets		2,926,663	135,984	70,321	456,405	349,571	3,938,944
		25,698,145	8,439,245	1,583,310	5,928,477	9,252,569	50,901,746
Liabilities							
Deposits		13,016,480	7,207,653	693,052	4,553,334	5,216,302	30,686,821
Financial liabilities at FVTPL		-	-	-	-	458,934	458,934
Derivative liabilities		165,761	-	1,914	2,089	4,892	174,656
Borrowings		5,881,097	444,481	280,949	395,719	167,995	7,170,241
Debt securities issued		4,110,789	317,125	40,933	-	1,103,732	5,572,579
Other financial liabilities		2,621,974	192,161	125,434	573,544	540,510	4,053,623
		25,796,101	8,161,420	1,142,282	5,524,686	7,492,365	48,116,854
Net assets (liabilities)		(97,956)	277,825	441,028	403,791	1,760,204	2,784,892
Off balance sheet items							
Derivative exposures		316,006	(58,204)	(388,554)	(34,075)	(88,718)	(253,545)
Net position	₩	218,050	219,621	52,474	369,716	1,671,486	2,531,347

(In millions of won)

4. Financial risk management (continued)

4-2. Market risk (continued)

(c) Foreign exchange risk (continued)

		December 31, 2017					
		USD	JPY	EUR	CNY	Others	Total
Assets							
Cash and due from banks	₩	2,343,055	955,205	267,008	1,932,502	1,482,475	6,980,245
Trading assets		5,273	-	-	-	189,297	194,570
Derivative assets		59,391	4	766	203	1,455	61,819
Loans		14,461,961	5,739,301	1,196,346	2,774,264	5,059,607	29,231,479
Available-for-sale financial assets		1,855,032	113,239	52,583	395,150	666,486	3,082,490
Held-to-maturity financial assets		78,975	137,100	-	37,096	451,922	705,093
Other financial assets		1,586,395	288,243	154,853	458,166	286,725	2,774,382
		20,390,082	7,233,092	1,671,556	5,597,381	8,137,967	43,030,078
Liabilities							
Deposits		11,998,969	6,286,743	757,326	4,283,274	4,878,846	28,205,158
Trading liabilities		-	-	-	-	434,586	434,586
Derivative liabilities		101,520	195	631	4,734	713	107,793
Borrowings		4,960,709	291,342	231,539	407,678	68,988	5,960,256
Debt securities issued		3,027,696	249,616	31,981	196,380	419,781	3,925,454
Other financial liabilities		2,531,630	208,516	208,527	472,207	276,083	3,696,963
		22,620,524	7,036,412	1,230,004	5,364,273	6,078,997	42,330,210
Net assets (liabilities)		(2,230,442)	196,680	441,552	233,108	2,058,970	699,868
Off balance sheet items							
Derivative exposures		2,142,130	9,462	(433,642)	81,099	(633,174)	1,165,875
Net position	₩	(88,312)	206,142	7,910	314,207	1,425,796	1,865,743

4. Financial risk management (continued)

4-3. Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Risk Policy Committee is responsible for establishing policies and setting the limits related to liquidity risk management. The Risk Management Department evaluates and manages the Group's overall liquidity risk and monitors compliance of all operating subsidiaries and foreign branches with limits on a daily basis.

The Group applies the following basic principles for liquidity risk management:

- raise funding in sufficient amounts at the optimal time and reasonable costs;
- maintain risk at appropriate levels and preemptively manage them through a prescribed risk limit system and an early warning signal detection system;
- secure stable sources of revenue and minimize actual losses by implementing an effective asset-liability management system based on diversified sources of funding with varying maturities;
- monitor and manage daily and intra-daily liquidity positions and risk exposures as to timely payment and settlement of financial obligations due under both normal and crisis situations;
- conduct periodic contingency analysis in anticipation of any potential liquidity crisis and establish and implement emergency plans in case of a crisis actually happening; and
- consider liquidity-related costs, benefits and risks in determining the price of products and services, employee performance evaluations and approval of launching new products and services.

The Group manages its liquidity risk within the limits set on won and foreign currency by using various analysis methods such as liquidity gap, real liquidity gap and loan-deposit ratio through the ALM system and various indices including risk limits, early warning index, and monitoring index.

The following table presents the Group's cash flows of financial assets and financial liabilities. The amounts disclosed in the table are the contractual undiscounted cash flows. Since the effect of the discount is insignificant for the balance with the maturities of less than 12 months, the amount is the same as the book value.

(In millions of won)

4. Financial risk management (continued)

4-3. Liquidity risk (continued)

(a) Contractual maturities for financial instruments

Contractual maturities for financial assets and financial liabilities as of December 31, 2018 and 2017 were as follows:

		December 31, 2018						
		1 month or less	1 month~ 3 months or less	3 months~ 6 months or less	6 months~ 1 year or less	1 year~ 5 years or less	More than 5 years	Total
Assets								
Cash and due from banks	₩	11,756,787	675,537	673,225	82,202	58	-	13,187,809
Securities at FVTPL		15,612,433	-	-	-	-	-	15,612,433
Derivative assets		1,472,004	50,498	66,815	106,966	495,274	262,007	2,453,564
Loans at amortized cost		22,225,699	26,584,311	38,564,391	60,699,972	74,171,256	60,271,062	282,516,691
Loans at FVTPL		28,221	386,353	39,154	102,394	101,725	-	657,847
Securities at FVOCI		31,466,977	-	-	-	-	411,371	31,878,348
Securities at amortized cost		482,234	1,298,891	396,923	2,061,008	13,527,891	801,152	18,568,099
Other financial assets		13,152,211	-	-	-	-	1,110,556	14,262,767
	₩	96,196,566	28,995,590	39,740,508	63,052,542	88,296,204	62,856,148	379,137,558
Liabilities								
Deposits	₩	119,899,315	23,977,712	33,362,815	54,459,955	27,536,213	2,835,925	262,071,935
Financial liabilities at FVTPL		459,336	193	53	10,403	10,124	-	480,109
Derivative liabilities		1,671,223	40,891	56,711	102,831	523,026	272,663	2,667,345
Borrowings		3,739,100	2,675,305	2,022,551	2,777,822	4,164,139	1,103,572	16,482,489
Debt securities issued		2,402,156	4,023,015	3,917,384	6,779,292	13,497,283	3,399,603	34,018,733
Other financial liabilities		15,377,699	-	-	-	130,122	-	15,507,821
	₩	143,548,829	30,717,116	39,359,514	64,130,303	45,860,907	7,611,763	331,228,432

These amounts include cash flows of principal and interest on financial assets and financial liabilities. The undiscounted cash flows were classified based on the earliest dates for obligated repayment. Financial assets at FVTPL and financial assets at FVOCI except for assets restricted for sale for certain periods were included in 1 month or less.

(In millions of won)

4. Financial risk management (continued)

4-3. Liquidity risk (continued)

(a) Contractual maturities for financial instruments (continued)

		December 31, 2017						
		1 month or less	1 month~ 3 months or less	3 months~ 6 months or less	6 months~ 1 year or less	1 year~ 5 years or less	More than 5 years	Total
Assets								
Cash and due from banks	₩	17,692,577	640,029	231,699	131,391	5,008	-	18,700,704
Trading assets		11,216,398	-	-	-	-	-	11,216,398
Derivative assets		2,715,665	285,632	78,501	121,845	346,065	143,032	3,690,740
Loans		19,613,910	27,102,835	36,486,097	56,796,297	64,140,522	54,087,978	258,227,639
Available-for-sale financial assets		31,672,125	-	-	-	-	823,416	32,495,541
Held-to-maturity financial assets		121,160	143,405	202,680	1,372,783	13,567,630	1,050,348	16,458,006
Other financial assets		8,043,587	-	-	1,364	1,104,932	-	9,149,883
	₩	91,075,422	28,171,901	36,998,977	58,423,680	79,164,157	56,104,774	349,938,911
Liabilities								
Deposits	₩	127,474,369	20,940,723	30,674,220	51,094,384	15,745,090	1,895,195	247,823,981
Trading liabilities		434,586	-	-	-	-	-	434,586
Derivative liabilities		2,484,338	38,289	30,028	46,915	164,442	60,717	2,824,729
Borrowings		5,469,114	2,354,580	1,296,828	2,338,371	2,763,308	632,682	14,854,883
Debt securities issued		612,200	2,812,829	2,155,415	6,868,469	12,190,221	2,940,935	27,580,069
Other financial liabilities		14,805,782	-	-	-	129,329	-	14,935,111
	₩	151,280,389	26,146,421	34,156,491	60,348,139	30,992,390	5,529,529	308,453,359

These amounts include cash flows of principal and interest on financial assets and financial liabilities. The undiscounted cash flows were classified based on the earliest dates for obligated repayment. Trading assets and available-for-sale financial assets except for assets restricted for sale for certain periods were included in the less than 1 month.

(b) Contractual maturities for off balance sheet items

Financial guarantees such as financial guarantee contracts, loan commitments and others provided by the Group are classified based on the earliest date at which the Group should fulfill the obligation under the guarantee when the counterparty requests for the payment.

Off balance sheet items as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Financial guarantee contracts	₩	4,391,207	3,242,514
Loan commitments and others		91,002,891	73,790,861
	₩	95,394,098	77,033,375

4. Financial risk management (continued)

4-4. Measurement of fair value

The fair value which the Group primarily uses for measurement of financial instruments are the published price quotations in an active market which are based on the market prices or the dealer price quotations of financial instruments traded in an active market where available, which is the best evidence of fair value.

If the market for a financial instrument is not active, fair value is established either by using a valuation technique or independent third-party valuation service. The Group uses diverse valuation techniques under reasonable assumptions which are based on the inputs observable in markets at the end of each reporting period.

Valuation techniques include using the recent arm's length market transactions between knowledgeable, willing parties, if available, reference to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models. For example, the fair value for interest swaps is the present value of estimated future cash flows, and fair value for foreign exchange forwards contracts is measured by using the published forward exchange rate at the end of each reporting period.

The Group classifies and discloses fair value of the financial instruments into the following three-level hierarchy:

(i) Level 1: Financial instruments measured at quoted prices from active markets are classified as level 1.
(ii) Level 2: Financial instruments measured using valuation techniques where all significant inputs are observable market data are classified as level 2.
(iii) Level 3: Financial instruments measured using valuation techniques where one or more significant inputs are not based on observable market data are classified as level 3.

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value

i) The table below analyzes financial instruments measured at the fair value as of December 31, 2018 and 2017 by the level in the fair value hierarchy into which the fair value measurement is categorized:

		December 31, 2018			
		Level 1	Level 2	Level 3	Total
Financial assets					
Loans at FVTPL:					
Loans	₩	-	407,996	237,241	645,237
Securities at FVTPL:					
Debt securities		1,039,563	13,020,589	1,274,079	15,334,231
Equity securities		79,567	-	43,754	123,321
Gold/silver deposits		154,881	-	-	154,881
Derivative assets:					
Trading		-	1,440,695	2,675	1,443,370
Hedging		-	36,502	4,586	41,088
Securities at FVOCI:					
Debt securities		9,223,783	22,211,763	-	31,435,546
Equity securities		135,815	-	306,987	442,802
	₩	10,633,609	37,117,545	1,869,322	49,620,476
Financial liabilities					
Financial liabilities at FVTPL:					
Securities sold	₩	20,625	-	-	20,625
Gold/silver deposits		458,934	-	-	458,934
Derivative liabilities:					
Trading		953	1,295,021	2,658	1,298,632
Hedging		-	111,833	361,120	472,953
	₩	480,512	1,406,854	363,778	2,251,144

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

		December 31, 2017			
		Level 1	Level 2	Level 3	Total
Financial assets					
Trading assets:					
Debt securities	₩	1,328,512	9,177,846	-	10,506,358
Equity securities		218,969	301,774	-	520,743
Gold/silver deposits		189,297	-	-	189,297
Derivative assets:					
Trading		33	2,585,491	8,343	2,593,867
Hedging		-	8,424	1,799	10,223
Available-for-sale financial assets:					
Debt securities		8,897,634	21,061,535	-	29,959,169
Equity securities		404,623	1,013,679	1,118,070	2,536,372
	₩	11,039,068	34,148,749	1,128,212	46,316,029
Financial liabilities					
Trading liabilities:					
Gold/silver deposits	₩	434,586	-	-	434,586
Derivative liabilities:					
Trading		55	2,468,792	3,574	2,472,421
Hedging		-	95,353	425,162	520,515
	₩	434,641	2,564,145	428,736	3,427,522

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

ii) There was no transfer between level 1 and level 2 for the years ended December 31, 2018 and 2017.

iii) Changes in level 3 of the fair value hierarchy

Changes in level 3 of the fair value hierarchy for the years ended December 31, 2018 and 2017 were as follows:

		December 31, 2018				
		Loans at FVTPL	Securities at FVTPL	Securities at FVOCI	Net derivative instruments	Total
Beginning balance(*1)	₩	113,168	841,791	279,560	(418,594)	815,925
Total gain or loss:						
Recognized in profit or loss (*2)		3,012	278,898	-	56,362	338,272
Recognized in other comprehensive loss		-	-	27,484	-	27,484
Purchases/issues		187,474	292,109	-	(779)	478,804
Settlements		(66,413)	(94,965)	(57)	6,487	(154,948)
Transfers into level 3 (*3)		-	-	-	7	7
Ending balance	₩	237,241	1,317,833	306,987	(356,517)	1,505,544

(*1) The beginning balance was restated in accordance with K-IFRS No.1109.

		December 31, 2017				
		Trading assets	Available-for-sale financial assets	Net derivative instruments	Financial liabilities designated at fair value through profit or loss	Total
Beginning balance	₩	14,936	1,131,599	(229,895)	(2,005)	914,635
Total gain or loss:						
Recognized in profit or loss (*2)		-	(149,742)	(191,909)	4	(341,647)
Recognized in other comprehensive loss		-	(10,515)	-	-	(10,515)
Purchases/issues		-	238,333	2,441	-	240,774
Settlements		(14,936)	(95,035)	741	2,001	(107,229)
Transfers into level 3 (*3)		-	3,430	28	-	3,458
Ending balance	₩	-	1,118,070	(418,594)	-	699,476

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

(*2) Gains or losses among the changes in level 3 of the fair value hierarchy and gains or losses related to financial instruments that the Group held as of December 31, 2018 and 2017 are presented in the statement of comprehensive income as follows:

		December 31, 2018		December 31, 2017	
		Gains or losses recognized in profit or loss	Gains or losses recognized in profit or loss for financial instrument held at the end of the year	Gains or losses recognized in profit or loss	Gains or losses recognized in profit or loss for financial instrument held at the end of the year
Net gain on financial assets at FVTPL	₩	282,700	278,007	-	-
Net trading loss		-	-	(2,996)	(2,996)
Net gain on financial instruments designated at fair value through profit or loss		-	-	4	-
Net gain on sale of available-for-sale financial assets		-	-	1,232	989
Impairment loss on financial assets		-	-	(150,974)	(150,974)
Net other operating income (expenses)		55,572	55,572	(188,913)	(188,913)
	₩	338,272	333,579	(341,647)	(341,894)

(*3) These financial instruments were transferred into or out of level 3 as the availability of observable market data has changed. The Group recognized transfers between levels of the fair value hierarchy at the end of the reporting period during which the event or the change in circumstances that caused the transfer has occurred.

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

iv) Valuation techniques and inputs used in measuring fair value of financial instruments

ⓐ Valuation techniques and inputs used in measuring fair value of financial instruments classified as level 2 as of December 31, 2018 and 2017 were as follows:

	December 31, 2018			
	Type of financial instruments	Book value	Valuation techniques	Inputs
Financial assets				
Loans at FVTPL		₩ 407,996	Discounted cash flow	Discount rate
Securities at FVTPL	Debt securities	13,020,589	Discounted cash flow	Discount rate
			Net asset value	Price of underlying assets
Derivative assets	Trading	1,440,695	Option model, Discounted cash flow	Discount rate, foreign exchange rate, volatility, stock price, commodity index, etc.
	Hedging	36,502		
		1,477,197		
Securities at FVOCI	Debt securities	22,211,763	Discounted cash flow	Discount rate
		₩ 37,117,545		
Financial liabilities				
Derivative liabilities	Trading	₩ 1,295,021	Option model, Discounted cash flow	Discount rate, foreign exchange rate, volatility, stock price, commodity index, etc.
	Hedging	111,833		
		₩ 1,406,854		

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

	December 31, 2017				
	Type of financial instruments		Book value	Valuation techniques	Inputs
Financial assets					
Trading assets	Debt securities	₩	9,177,846	Discounted cash flow	Discount rate
	Equity securities		301,774	Net asset value	Price of underlying assets
			9,479,620		
Derivative assets	Trading		2,585,491	Option model	Discount rate, foreign exchange rate, volatility, stock price, commodity index, etc.
	Hedging		8,424	Discounted cash flow	
			2,593,915		
Available-for-sale financial assets	Debt securities		21,061,535	Discounted cash flow	Discount rate
	Equity securities		1,013,679	Net asset value	Price of underlying assets
			22,075,214		
		₩	34,148,749		
Financial liabilities					
Derivative liabilities	Trading	₩	2,468,792	Option model	Discount rate, foreign exchange rate, volatility, stock price, commodity index, etc.
	Hedging		95,353	Discounted cash flow	
		₩	2,564,145		

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

ⓑ Information about valuation techniques and significant unobservable inputs in measuring financial instruments categorized as level 3 as of December 31, 2018 and 2017 were as follows:

	December 31, 2018					
	Valuation technique	Type of financial instrument		Book value	Significant unobservable input	Range of estimates for unobservable input
Financial assets						
Loans at FVTPL	Option model (*1)	Loans	₩	237,241	Volatility of underlying assets	16.39%~42.56%
Securities at FVTPL	Net asset value method	Debt securities		1,274,079	Price of underlying assets	-
	Discounted cash flow	Equity securities		43,754	Discount rate Terminal growth rate	5.80%~17.00% 0.00%
				1,317,833		
Derivative assets	Option model (*2)	Equity and foreign exchange related		145	Volatility of underlying assets	2.20%~25.96%
	Option model (*2)	Interest rates related		7,116	Volatility of underlying assets Regression coefficient Correlations	0.42%~0.78% 0.42%~1.65% 44.93%~90.34%
				7,261		
Securities at FVOCI	Discounted cash flow	Equity securities		306,987	Discount rate Terminal growth rate	8.43%~17.40% 0.00%
			₩	1,869,322		
Financial liabilities						
Derivative Liabilities	Option model (*2)	Equity and foreign exchange related	₩	257	Volatility of underlying assets	2.20%~25.96%
	Option model (*2)	Interest rates related		363,521	Volatility of underlying assets Regression coefficient Correlations	0.47%~0.78% 0.42%~2.77% 28.15%~90.34%
			₩	363,778		

(*1) The Group uses binominal tree option model when measuring the fair value for loans at FVTPL.
(*2) Option models that the Group uses in derivative valuation include Black-Scholes model, Hull-White model, Monte Carlo simulation, etc.

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

	December 31, 2017					
	Valuation technique	Type of financial instrument		Book value	Significant unobservable input	Range of estimates for unobservable input
Financial assets						
Derivative assets	Option model (*1)	Equity and foreign exchange related	₩	4,846	Volatility of underlying assets	1.32%~29.53%
					Correlations	0.14%
	Option model (*1)	Interest rates related		5,296	Volatility of underlying assets	0.42%~0.70%
					Regression coefficient	0.42%~1.65%
					Correlations	42.20%~90.33%
				10,142		
Available-for-sale financial assets	Discounted cash flow	Equity securities		1,118,070	Discount rate	1.98%~20.51%
	Comparable company analysis				Terminal growth rate	0.00%
	Net asset value					
			₩	1,128,212		
Financial liabilities						
Derivative liabilities	Option model (*1)	Equity and foreign exchange related	₩	80	Volatility of underlying asset	1.32%~26.30%
					Correlations	0.14%
	Option model (*1)	Interest rates related		428,656	Volatility of underlying asset	0.50%~0.70%
					Regression coefficient	1.65%~2.77%
					Correlations	32.63%~90.33%
			₩	428,736		

(*1) Option models that the Group uses in derivative valuation include Black-Scholes model, Hull-White model, Monte Carlo simulation, etc.

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

v) Sensitivity to changes in unobservable inputs.

For level 3 fair value measurement, changing one or more of the unobservable inputs used to reasonably possible alternative assumptions would have the following effect on profit (loss), and other comprehensive income (loss) as of December 31, 2018 and 2017 were as follows:

			December 31, 2018			
			Profit (loss) for the year		Other comprehensive income (loss) for the year	
Type of financial instrument			Favorable change	Unfavorable change	Favorable change	Unfavorable change
Loans at FVTPL (*1)		₩	8,858	(7,233)	-	-
Derivative assets (*1)	Equity and foreign exchange related		57	(38)	-	-
	Interest rates related		461	(701)	-	-
Securities at FVTPL (*2)	Debt securities (*3)		1,176	(807)	-	-
	Equity securities		3,256	(1,754)	-	-
Securities at FVOCI (*2)	Equity securities		-	-	8,596	(4,843)
		₩	13,808	(10,533)	8,596	(4,843)
Derivative liabilities (*1)	Equity and foreign exchange related	₩	854	(912)	-	-
	Interest rates related		10,186	(10,362)	-	-
		₩	11,040	(11,274)	-	-

(*1) Based on 10% of increase or decrease in volatility of underlying assets or correlations.
(*2) Based on changes in growth rate (0%~1%) and discount rate (-1%p~1%p).
(*3) ₩1,033,938 million of Securities at FVTPL classified as level 3 are excluded from sensitivity analysis since calculation of sensitivity according to the fluctuation of input variables is impracticable.

			December 31, 2017			
			Profit (loss) for the year		Other comprehensive income (loss) for the year	
Type of financial instrument			Favorable change	Unfavorable change	Favorable change	Unfavorable change
Derivative assets (*1)	Equity and foreign exchange related	₩	1,238	(846)	-	-
	Interest rates related		278	(326)	-	-
Available-for-sale financial assets (*2)	Equity securities (*3)		-	-	16,435	(8,229)
		₩	1,516	(1,172)	16,435	(8,229)
Derivative liabilities (*1)	Equity and foreign exchange related	₩	10	(13)	-	-
	Interest rates related		13,820	(13,280)	-	-
		₩	13,830	(13,293)	-	-

(*1) Based on 10% of increase or decrease in volatility of underlying assets or correlations.
(*2) Based on changes in growth rate (0%~1%) and discount rate (-1%p~1%p).
(*3) ₩770,784 million of available-for-sale financial assets classified as level 3 are excluded from sensitivity analysis since calculation of sensitivity according to the fluctuation of input variables is impracticable.

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost

i) The method of measuring the fair value of financial instruments measured at amortized cost is as follows:

Type	Measurement methods of fair value
Cash and due from banks	The book value and the fair value for cash are identical and most of deposits are floating interest rate deposits or next day deposits of a short-term instrument. Therefore, the book value for deposits approximates fair value.
Loans at amortized cost	The fair value of loans at amortized cost is measured by discounting the expected cash flows at the market interest rate, credit risk, etc.
Securities at amortized cost	The fair value of securities at amortized cost is determined by applying the lesser of two quoted bond prices provided by two bond pricing agencies as of the latest trading date.
Deposits and borrowings	The book amount and the fair value for demand deposits, cash management account deposits, call money and bonds sold under repurchase agreements as short-term instruments are identical. The fair value of others is measured by discounting the contractual cash flows at the market interest rate that takes into account the residual risk.
Debt securities issued	The fair value of deposits and borrowings is based on the published price quotations in an active market. In case there is no observable market price, it is measured by discounting the contractual cash flow at the market interest rate that takes into account the residual risk.

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost (continued)

ii) The book value and the fair value of financial instruments measured at amortized cost as of December 31, 2018 and 2017 were as follows:

		December 31, 2018				
		Book value				
		Balance	Unamortized balance	Allowance	Total	Fair value
Assets						
Cash and due from banks:						
Cash	₩	2,568,913	-	-	2,568,913	2,568,913
Due from banks		10,596,149	-	(14,785)	10,581,364	10,581,364
Loans at amortized cost:						
Household loans		112,594,439	418,020	(305,288)	112,707,171	113,677,417
Corporate loans		133,399,567	76,685	(1,339,174)	132,137,078	133,163,232
Public and other loans		2,729,075	1,558	(20,053)	2,710,580	2,733,532
Loans to bank		3,586,594	-	(6,395)	3,580,199	3,581,605
Credit card receivables		103,580	-	(4,802)	98,778	103,175
Securities at amortized cost:						
Government bonds		11,695,562	-	(1,454)	11,694,108	11,793,483
Financial institutions bonds		929,757	-	(357)	929,400	931,157
Corporate bonds and others		4,129,043	-	(2,953)	4,126,090	4,165,754
Others		74,802	-	-	74,802	74,802
Other financial assets		14,262,768	(36,355)	(25,612)	14,200,801	14,218,601
	₩	296,670,249	459,908	(1,720,873)	295,409,284	297,593,035
Liabilities						
Deposits:						
Demand deposits	₩	104,998,305	-	-	104,998,305	104,998,305
Time deposits		135,486,566	-	-	135,486,566	135,414,254
Negotiable certificates of deposits		9,213,652	-	-	9,213,652	9,265,012
Note discount deposits		4,087,529	-	-	4,087,529	4,087,338
CMA (*1)		4,084,709	-	-	4,084,709	4,084,709
Others		21,963	-	-	21,963	21,963
Borrowings:						
Call money		960,162	-	-	960,162	960,162
Bill sold		14,536	-	-	14,536	14,506
Bonds sold under repurchase agreements		83,028	-	-	83,028	83,028
Borrowings		15,098,953	(1,858)	-	15,097,095	15,163,551
Debt securities issued:						
Debt securities issued in Korean won		26,418,732	(62,944)	-	26,355,788	26,625,655
Debt securities issued in foreign currencies		5,572,580	(29,102)	-	5,543,478	5,345,938
Other financial liabilities		15,462,193	(2,118)	-	15,460,075	15,443,585
	₩	321,502,908	(96,022)	-	321,406,886	321,508,006

(*1) CMA: Cash management account deposits

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost (continued)

		December 31, 2017				
		Book value				
		Balance	Unamortized balance	Allowance	Total	Fair value
Assets						
Cash and due from banks:						
Cash	₩	1,749,897	-	-	1,749,897	1,749,897
Due from banks		16,926,471	-	(14,046)	16,912,425	16,912,425
Loans:						
Household loans		103,724,329	361,170	(336,134)	103,749,365	103,425,377
Corporate loans		123,835,486	63,780	(1,150,289)	122,748,977	123,254,416
Public and other loans		2,203,307	1,146	(10,135)	2,194,318	2,202,338
Loans to bank		2,961,877	-	(4,054)	2,957,823	2,948,387
Credit card receivables		87,618	-	(5,945)	81,673	87,355
Held-to-maturity financial assets:						
Government bonds		9,808,234	-	-	9,808,234	9,812,768
Financial institutions bonds		1,224,816	-	-	1,224,816	1,223,340
Corporate bonds and others		3,789,848	-	-	3,789,848	3,786,215
Other financial assets		9,149,590	(42,434)	(26,252)	9,080,904	9,102,615
	₩	275,461,473	383,662	(1,546,855)	274,298,280	274,505,133
Liabilities						
Deposits:						
Demand deposits	₩	101,742,731	-	-	101,742,731	101,742,731
Time deposits		125,787,781	-	-	125,787,781	125,659,179
Negotiable certificates of deposits		7,478,278	-	-	7,478,278	7,517,777
Note discount deposits		3,423,459	-	-	3,423,459	3,423,320
CMA		4,197,146	-	-	4,197,146	4,197,146
Others		24,349	-	-	24,349	24,349
Borrowings:						
Call money		561,813	-	-	561,813	561,813
Bill sold		13,605	-	-	13,605	13,580
Bonds sold under repurchase agreements		297,599	-	-	297,599	297,599
Borrowings		13,744,713	(168)	-	13,744,545	13,725,468
Debt securities issued:						
Debt securities issued in Korean won		21,587,948	(29,698)	-	21,558,250	21,417,544
Debt securities issued in foreign currencies		3,925,454	(23,277)	-	3,902,177	3,918,403
Other financial liabilities		14,972,891	(2,915)	-	14,969,976	14,942,184
	₩	297,757,767	(56,058)	-	297,701,709	297,441,093

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost (continued)

iii) Fair value hierarchy of financial instruments which are not measured at fair value in the consolidated statements of financial position as of December 31, 2018 and 2017 were as follows:

		December 31, 2018			
		Level 1	Level 2	Level 3	Total
Assets					
Cash and due from banks:					
Cash	₩	2,568,913	-	-	2,568,913
Due from banks		-	10,581,364	-	10,581,364
Loans at amortized cost:					
Household loans		-	-	113,677,417	113,677,417
Corporate loans		-	-	133,163,232	133,163,232
Public and other loans		-	-	2,733,532	2,733,532
Loans to bank		-	2,499,812	1,081,793	3,581,605
Credit card receivables		-	-	103,175	103,175
Securities at amortized cost:					
Government bonds		768,812	11,024,671	-	11,793,483
Financial institutions bonds		719,925	211,232	-	931,157
Corporate bonds and others		-	4,165,754	-	4,165,754
Others		-	74,802	-	74,802
Other financial assets		-	11,606,370	2,612,231	14,218,601
	₩	4,057,650	40,164,005	253,371,380	297,593,035
Liabilities					
Deposits:					
Demand deposits	₩	-	104,998,305	-	104,998,305
Time deposits		-	-	135,414,254	135,414,254
Negotiable certificates of deposits		-	-	9,265,012	9,265,012
Note discount deposits		-	-	4,087,338	4,087,338
CMA		-	4,084,709	-	4,084,709
Others		-	-	21,963	21,963
Borrowings:					
Call money		-	960,162	-	960,162
Bill sold		-	-	14,506	14,506
Bonds sold under repurchase agreements		-	-	83,028	83,028
Borrowings		-	-	15,163,551	15,163,551
Debt securities issued:					
Debt securities issued in Korean won		-	23,756,717	2,868,938	26,625,655
Debt securities issued in foreign currencies		-	5,345,938	-	5,345,938
Other financial liabilities		-	6,630,726	8,812,859	15,443,585
	₩	-	145,776,557	175,731,449	321,508,006

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost (continued)

		December 31, 2017			
		Level 1	Level 2	Level 3	Total
Assets					
Cash and due from banks:					
Cash	₩	1,749,897	-	-	1,749,897
Due from banks		-	16,912,425	-	16,912,425
Loans:					
Household loans		-	-	103,425,377	103,425,377
Corporate loans		-	-	123,254,416	123,254,416
Public and other loans		-	-	2,202,338	2,202,338
Loans to bank		-	848,225	2,100,162	2,948,387
Credit card receivables		-	-	87,355	87,355
Held-to-maturity financial assets:					
Government bonds		1,411,506	8,401,262	-	9,812,768
Financial institutions bonds		936,067	287,273	-	1,223,340
Corporate bonds and others		-	3,786,215	-	3,786,215
Other financial assets		-	6,832,567	2,270,048	9,102,615
	₩	4,097,470	37,067,967	233,339,696	274,505,133
Liabilities					
Deposits:					
Demand deposits	₩	-	101,742,731	-	101,742,731
Time deposits		-	-	125,659,179	125,659,179
Negotiable certificates of deposits		-	-	7,517,777	7,517,777
Note discount deposits		-	-	3,423,320	3,423,320
CMA		-	4,197,146	-	4,197,146
Others		-	-	24,349	24,349
Borrowings:					
Call money		-	561,813	-	561,813
Bill sold		-	-	13,580	13,580
Bonds sold under repurchase agreements		-	-	297,599	297,599
Borrowings		-	-	13,725,468	13,725,468
Debt securities issued:					
Debt securities issued in Korean won		-	18,877,627	2,539,917	21,417,544
Debt securities issued in foreign currencies		-	3,918,403	-	3,918,403
Other financial liabilities		-	5,642,142	9,300,042	14,942,184
	₩	-	134,939,862	162,501,231	297,441,093

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost (continued)

iv) For financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed, valuation techniques and inputs used in measuring fair value of financial instruments classified as level 2 or level 3 as of December 31, 2018 and 2017 were as follows :

	December 31, 2018				
Level	Type of financial instrument		Fair value	Valuation technique	Inputs
Level 2	Securities at amortized cost	₩	15,476,459	Discounted cash flow	Discount rate
Level 3	Loans at amortized cost		250,759,149		Discount rate, Credit spread, Prepayment rate
	Other financial assets		2,612,231		Discount rate
		₩	268,847,839		
Level 2	Debt securities issued	₩	29,102,655	Discounted cash flow	Discount rate
Level 3	Deposits		147,759,425		Discount rate
	Borrowings		10,380,014		Discount rate
	Debt securities issued		2,868,938		Discount rate, Regression coefficient, Correlation coefficient
	Other financial liabilities		8,812,859		Discount rate
		₩	198,923,891		

	December 31, 2017				
Level	Type of financial instrument		Fair value (*1)	Valuation technique	Inputs
Level 2	Held-to-maturity financial assets	₩	12,474,750	Discounted cash flow	Discount rate
Level 3	Loans		231,069,648		Discount rate, Credit spread, Prepayment rate
	Other financial assets		2,270,048		Discount rate
		₩	245,814,446		
Level 2	Debt securities issued	₩	22,796,030	Discounted cash flow	Discount rate
Level 3	Deposits		135,627,081		Discount rate
	Borrowings		8,849,302		Discount rate
	Debt securities issued		2,539,917		Discount rate, Regression coefficient, Correlation coefficient
	Other financial liabilities		9,300,042		Discount rate
		₩	179,112,372		

(*1) The amounts, which were not evaluated by the valuation technique, are not included and disclosed because the carrying amount is the reasonable approximation of fair value.

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(c) Deferred day one profit or loss for the years ended December 31, 2018 and 2017 were as follows:

		December 31, 2018			
		Beginning balance	Deferred	Amortization	Ending balance
Loans at FVTPL	₩	(4,929)	(2,506)	2,925	(4,510)
Securities at FVTPL		-	4	-	4

		December 31, 2017			
		Beginning balance	Deferred	Amortization	Ending balance
Financial liabilities designated at fair value through profit or loss	₩	(12)	-	12	-
Equity swap liabilities		12	-	(12)	-

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(d) Classification by category of financial instruments

Financial assets and liabilities were measured at fair value or amortized cost. Financial instruments measured at fair value or amortized costs were measured in accordance with the Group's valuation methodologies, which were described in Note 3.

The carrying amounts of each category of financial instruments as of December 31, 2018 and 2017 were as follows:

		December 31, 2018				
		Financial assets at FVTPL	Financial assets at FVOCI	Financial assets at amortized cost	Derivatives held for hedging	Total
Assets						
Due from banks	₩	-	-	10,581,364	-	10,581,364
Securities at FVTPL		15,612,433	-	-	-	15,612,433
Derivative assets		1,443,371	-	-	41,087	1,484,458
Loans at FVTPL		645,237	-	-	-	645,237
Loans at amortized cost		-	-	251,233,806	-	251,233,806
Securities at FVOCI		-	31,878,348	-	-	31,878,348
Securities at amortized cost		-	-	16,824,400	-	16,824,400
Other financial assets		-	-	14,200,801	-	14,200,801
	₩	17,701,041	31,878,348	292,840,371	41,087	342,460,847

		Financial liabilities at FVTPL	Financial liabilities at amortized cost	Derivatives held for hedging	Total
Liabilities					
Deposits	₩	-	257,892,724	-	257,892,724
Financial liabilities at FVTPL		479,559	-	-	479,559
Derivative liabilities		1,298,632	-	472,953	1,771,585
Borrowings		-	16,154,821	-	16,154,821
Debt securities issued		-	31,899,266	-	31,899,266
Other financial liabilities		-	15,460,075	-	15,460,075
	₩	1,778,191	321,406,886	472,953	323,658,030

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(d) Classification by category of financial instruments (continued)

		December 31, 2017					
		Financial assets at fair value through profit or loss	Available-for-sale financial assets	Held-to-maturity financial assets	Loans and receivables	Derivatives held for hedging	Total
Assets							
Due from banks	₩	-	-	-	16,912,425	-	16,912,425
Trading assets		11,216,398	-	-	-	-	11,216,398
Derivative assets		2,593,867	-	-	-	10,223	2,604,090
Loans		-	-	-	231,732,156	-	231,732,156
Available-for-sale financial assets		-	32,495,541	-	-	-	32,495,541
Held-to-maturity financial assets		-	-	14,822,898	-	-	14,822,898
Other financial assets		-	-	-	9,080,904	-	9,080,904
	₩	13,810,265	32,495,541	14,822,898	257,725,485	10,223	318,864,412

		Trading liabilities	Financial liabilities measured at amortized cost	Derivatives held for hedging	Total
Liabilities					
Deposits	₩	-	242,653,744	-	242,653,744
Trading liabilities		434,586	-	-	434,586
Derivative liabilities		2,472,421	-	520,515	2,992,936
Borrowings		-	14,617,562	-	14,617,562
Debt securities issued		-	25,460,427	-	25,460,427
Other financial liabilities		-	14,969,976	-	14,969,976
	₩	2,907,007	297,701,709	520,515	301,129,231

There are no financial assets and financial liabilities that are reclassified between financial instruments during the year.

(In millions of won)

4. Financial risk management (continued)

4-4. Measurement of fair value (continued)

(e) Financial instruments income and costs by category for the years ended December 31, 2018 and 2017 were as follows:

		December 31, 2018					
		Interest income (expense)	Fees and commission income (expense)	Reversal of (provision for) credit loss allowance	Others	Total	Other comprehensive income (loss)
Securities at FVTPL	₩	221,569	10,403	-	348,809	580,781	-
Securities at FVOCI		607,771	-	(8,395)	27,264	626,640	165,538
Securities at amortized cost		403,707	-	1,122	-	404,829	-
Loans at FVTPL		12,462	-	-	13,827	26,289	-
Loans at amortized cost		8,184,956	73,870	(245,113)	25,999	8,039,712	-
Other financial assets		166,260	113,305	1,400	-	280,965	-
Financial liabilities at FVTPL		-	(18)	-	-	(18)	-
Financial liabilities at amortized cost		(4,010,730)	(126)	-	(75,693)	(4,086,549)	(36,383)
Net derivatives held for hedging		-	-	-	75,757	75,757	505
Allowance for off balance sheet items		-	-	7,847	-	7,847	-
	₩	5,585,995	197,434	(243,139)	415,963	5,956,253	129,660

		December 31, 2017					
		Interest income (expense)	Fees and commission income (expense)	Impairment loss	Others	Total	Other comprehensive income (loss)
Trading assets	₩	181,653	8,795	-	(136,955)	53,493	-
Available-for-sale financial assets		487,712	-	(178,228)	266,950	576,434	(131,022)
Held-to-maturity financial assets		355,696	-	-	-	355,696	-
Loans and receivables		7,098,340	164,801	(481,159)	40,511	6,822,493	-
Trading liabilities		-	(96)	-	-	(96)	-
Financial liabilities designated at fair value through profit or loss		-	-	-	(43)	(43)	-
Financial liabilities measured at amortized cost		(3,131,350)	(58)	-	194,559	(2,936,849)	90,727
Net derivatives held for hedging		-	-	-	(200,836)	(200,836)	6,626
	₩	4,992,051	173,442	(659,387)	164,186	4,670,292	(33,669)

4. Financial risk management (continued)

4-5. Capital risk management

Capital regulations applicable to banks were adopted in 1988, which focused primarily on capital adequacy and asset soundness as a measure of risk. Building upon the initial Basel Capital Accord of 1988, capital regulations were developed to reflect additional risks as well. For the purpose of improving risk management and increasing capital adequacy of banks, capital adequacy standards based on the new Basel Capital Accord (Basel III) was implemented by the Financial Services Commission regulations beginning on December 1, 2013. Under these regulations, all domestic banks including the Group are required to maintain a capital adequacy ratio of 8% or above and report whether the Group meet the capital adequacy ratio to the Financial Services Commission.

Under *the Banking Act*, the capital of a bank is divided into two categories.

(a) Tier 1 capital (Common equity Tier 1 capital + Additional Tier 1 capital)
i) Common equity Tier 1 capital: Common equity Tier 1 capital consists of capital stock, capital surplus, retained earnings (excluding regulatory reserve for loan loss), accumulated other comprehensive income, other disclosed reserves, and non-controlling interests that meet certain criteria.
ii) Additional Tier 1 capital: Additional Tier 1 capital consists of equity instrument that meet certain criteria for perpetual nature of the equity instrument, any related capital surplus, instruments issued by consolidated subsidiaries of the Bank and held by third parties that meet certain criteria.

(b) Tier 2 capital (Supplementary capital)
Tier 2 capital consists of instruments that meet certain criteria for loss absorption in case of liquidation, any related capital surplus, and instruments issued by consolidated subsidiaries of the Bank and held by third parties that meet certain criteria.

The capital adequacy ratio of the Group is calculated by ratios of Tier 1 and Tier 2 capital (less any capital deductions) to risk-weighted assets. Pursuant to Basel III, operational risk, such as inadequate procedures, loss risk by employees, internal systems, occurrence of unexpected events, as well as credit risk, market risk and additional risk are taken into account in calculating the risk-weighted assets.

The Group evaluates and manages the capital adequacy ratio pursuant to internally developed standards. It means that the Group assesses whether the level on ratio of available capital to economic capital is sufficient, or not. The Group manages the economic adequacy by the amount of each risk type including credit, market, operation, interest rate, liquidity, concentration, and foreign currency settlement risk, as well as the total amounts of all of those risk types.

(In millions of won)

4. Financial risk management (continued)

4-5. Capital risk management (continued)

Details of capital categories and the capital adequacy ratio of the Group as of December 31, 2018 and 2017 were as follows:

Category		December 31, 2018	December 31, 2017
Capital:			
Common equity Tier 1 capital	₩	22,113,697	20,891,478
Additional Tier 1 capital		698,660	669,927
Tier 1 capital		22,812,357	21,561,405
Tier 2 capital		4,687,083	3,829,348
	₩	27,499,440	25,390,753
Risk-weighted assets			
Credit risk-weighted assets (*1)	₩	154,994,030	146,784,021
Market risk-weighted assets		7,227,874	6,802,866
Operating risk-weighted assets		9,371,300	9,287,919
	₩	171,593,204	162,874,806
Capital adequacy ratio:			
Common equity Tier 1 capital ratio		12.89%	12.83%
Tier 1 capital ratio		13.29%	13.24%
Tier 2 capital ratio		2.73%	2.35%
Total capital ratio		16.03%	15.59%

(*1) The additional risk weighted assets resulting from the insufficient capital under capital floor is included in credit risk-weighted assets.

Pursuant to related regulations, the Group shall maintain the total capital ratio at 8.0% or above, Tier 1 capital ratio at 6.0% or above and common equity capital ratio at 4.5% or above. In 2016, the minimum regulatory BIS capital requirement to be met by 2019 was raised to 14% due to the enforcement of Basel III capital regulations. This is due to the additions of capital conservation buffer (2.5%p), additional capital buffer for Domestic Systemically Important Bank ("D-SIB") (1.0%p) and countercyclical capital buffer (2.5%p) to the existing minimum capital ratio. Capital conservation buffer and additional capital buffer for D-SIB will be adjusted upwards by 25%p per year through 2019 based on transitional arrangements. The addition of countercyclical capital buffer can be used up to a maximum of the buffer rate of 2.5%p in a period of excess aggregate credit growth. The minimum regulatory BIS capital ratio to be complied with as of the end of 2018 is 10.625%, which is due to the increases of 1.875%p for capital conservation buffer, 0.75%p for additional capital buffer for D-SIB, and 0%p for countercyclical capital buffer, respectively.

(In millions of won)

4. Financial risk management (continued)

4-6. Transaction as a transfer of financial instrument

(a) Transfers financial assets that were not derecognized

i) Bonds sold under repurchase agreements at a fixed price as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Transferred assets:			
Securities at FVOCI	₩	50,289	-
Securities at amortized cost		156,066	-
Available-for-sale financial assets		-	147,562
Held-to-maturity financial assets		-	615,352
	₩	206,355	762,914
Associated liabilities:			
Bonds sold under repurchase agreements	₩	83,028	297,599

ii) When the Group's securities are transferred, the Group transfers the ownership of the securities, but upon the termination, the Group will have to return the securities. As a result, securities loaned as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017	Lender
Available-for-sale financial assets				
Government bonds	₩	-	278,956	Korea Securities Finance Corp., Korea Securities Depository
Financial institutions bonds		-	319,580	Korea Securities Finance Corp., Korea Securities Depository
Securities at FVOCI:				
Government bonds		595,149	-	Korea Securities Finance Corp., Korea Securities Depository
Financial institutions bonds		319,770	-	Korea Securities Finance Corp., Korea Securities Depository
Securities at amortized cost:				
Government bonds		40,149	-	Korea Securities Finance Corp., Korea Securities Depository
Financial institutions bonds		90,060	-	Korea Securities Finance Corp., Korea Securities Depository
	₩	1,045,128	598,536	

(b) Financial instruments that were qualified for derecognition but under continuing involvement.

There are no financial instrument that meets the conditions of derecognition and in which the Group has continuing involvement as of December 31, 2018 and 2017.

(In millions of won)

4. Financial risk management (continued)

4-7. Offsetting financial assets and financial liabilities

Details of financial assets and financial liabilities subject to offsetting, enforceable master netting agreements and similar agreements as of December 31, 2018 and 2017 were as follows:

		December 31, 2018					
		Gross amounts of recognized financial assets and liabilities	Gross amounts of recognized financial assets and liabilities set off in the statement of financial position	Net amounts of financial assets and liabilities presented in the statement of financial position	Related amounts not set off in the statement of financial position		Net amount
					Financial instruments	Cash collateral received	
Financial assets							
Derivative assets (*1)	₩	1,481,678	-	1,481,678	6,594,662	7,396	957,276
Other financial assets (*1)		6,077,656	-	6,077,656			
Bonds sold under repurchase agreements related collateral of securities (*2)		206,356	-	206,356	83,028	-	123,328
Bonds purchased under resale agreement (Loans) (*2)		4,720,281	-	4,720,281	4,720,281	-	-
Securities lent (*2)		1,045,128	-	1,045,128	1,045,128	-	-
Domestic exchange settlements receivables (*3)		32,337,320	26,344,937	5,992,383	-	-	5,992,383
Receivable from disposal of securities, etc. (*4)		22,906	519	22,387	-	-	22,387
	₩	45,891,325	26,345,456	19,545,869	12,443,099	7,396	7,095,374
Financial liabilities							
Derivative liabilities (*1)	₩	1,757,177	-	1,757,177	6,795,260	-	280,055
Other financial liabilities (*1)		5,318,138	-	5,318,138			
Bonds sold under repurchase agreements (Borrowings) (*2)		83,028	-	83,028	83,028	-	-
Trading Securities		20,625	-	20,625	20,625	-	-
Domestic exchange settlement payables (*3)		27,361,193	26,344,937	1,016,256	1,016,256	-	-
Payable from purchase of securities, etc. (*4)		552	519	33	33	-	-
	₩	34,540,713	26,345,456	8,195,257	7,915,202	-	280,055

(*1) The Group has certain derivative transactions subject to the ISDA (International Swaps and Derivatives Association) agreement. According to the ISDA agreement, when credit events (e.g. default) of counterparties occur, the net amount after offsetting the amounts obligated by each party is settled.

(*2) Resale and repurchase agreement, securities borrowing and lending agreement are also similar to ISDA agreement with respect to enforceable netting agreements.

(*3) The Group has legally enforceable right to set off and settles financial assets and liabilities on a net basis. Therefore, domestic exchanges settlement receivables (payables) are recorded on a net basis in the consolidated statements of financial position.

(*4) Receivables and payables related to settlement of purchase and disposition of enlisted securities are offset and the net amount is presented in the consolidated statement of financial position because the Group currently has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis. The effect of offsetting due to the establishment of 'Central Counter Party ("CCP")' system is included in the amount.

(In millions of won)

4. **Financial risk management (continued)**

4-7. **Offsetting financial assets and financial liabilities (continued)**

		December 31, 2017					
		Gross amounts of recognized financial assets and liabilities	Gross amounts of recognized financial assets and liabilities set off in the statement of financial position	Net amounts of financial assets and liabilities presented in the statement of financial position	Related amounts not set off in the statement of financial position: Financial instruments	Related amounts not set off in the statement of financial position: Cash collateral received	Net amount
Financial assets							
Derivative assets (*1)	₩	2,598,157	-	2,598,157	5,488,818	271,805	1,054,938
Other financial assets (*1)		4,217,404	-	4,217,404			
Bonds sold under repurchase agreements related collateral of securities (*2)		434,631	-	434,631	297,599	-	137,032
Bonds purchased under resale agreement (Loans) (*2)		3,421,457	-	3,421,457	3,421,457	-	-
Securities lent (*2)		598,536	-	598,536	598,536	-	-
Domestic exchange settlements receivables (*3)		33,071,878	30,199,944	2,871,934	-	-	2,871,934
Receivables from disposal of securities, etc. (*4)		15,567	1,152	14,415	-	-	14,415
	₩	44,357,630	30,201,096	14,156,534	9,806,410	271,805	4,078,319
Financial liabilities							
Derivative liabilities (*1)	₩	2,954,649	-	2,954,649	5,553,780	-	1,060,514
Other financial liabilities (*1)		3,659,645	-	3,659,645			
Bonds sold under repurchase agreements (Borrowings) (*2)		297,599	-	297,599	297,599	-	-
Domestic exchange settlement payables (*3)		31,883,393	30,199,944	1,683,449	1,683,449	-	-
Payable from purchase of securities, etc. (*4)		1,519	1,152	367	326	-	41
	₩	38,796,805	30,201,096	8,595,709	7,535,154	-	1,060,555

(*1) The Group has certain derivative transactions subject to the ISDA (International Swaps and Derivatives Association) agreement. According to the ISDA agreement, when credit events (e.g. default) of counterparties occur, the net amount after offsetting the amounts obligated by each party is settled.
(*2) Resale and repurchase agreement, securities borrowing and lending agreement are also similar to ISDA agreement with respect to enforceable netting agreements.
(*3) The Group has legally enforceable right to set off and settles financial assets and liabilities on a net basis. Therefore, domestic exchanges settlement receivables (payables) are recorded on a net basis in the consolidated statements of financial position.
(*4) Receivables and payables related to settlement of purchase and disposition of enlisted securities are offset and the net amount is presented in the consolidated statement of financial position because the Group currently has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis. The effect of offsetting due to the establishment of ‘Central Counter Party (“CCP”)’ system is included in the amount.

5. Significant estimates and judgments

The preparation of consolidated financial statements requires the application of certain critical estimates and judgments relative to the future. Management's estimated outcomes may differ from actual outcomes. The change in an accounting estimate is recognized prospectively in profit or loss in the period of the change, if the change affects that period only, or the period of the change and future periods, if the change affects both.

(a) Income taxes

The Group is subject to tax laws from various countries. In the normal course of business, there are various types of transactions and different accounting methods that may add uncertainties to the decision of the final income taxes. The Group has recognized current and deferred taxes that reflect tax consequences based on the best estimates in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities. However, actual income taxes in the future may not be identical to the recognized deferred tax assets and liabilities, and this difference can affect current and deferred tax at the period when the final tax effect is determined.

(b) Fair value of financial instruments

The fair values of financial instruments which are not actively traded in the market are determined by using valuation techniques. The Group determines valuation techniques and assumptions based on significant market conditions at the end of each reporting period. Diverse valuation techniques are used to determine the fair value of financial instruments, from generic valuation techniques to internally developed valuation models that incorporate various types of assumptions and variables.

(c) Allowances for loan losses, guarantees and unused loan commitments

The Group determines and recognizes allowances for losses on debt securities, loans and other receivables measured at amortized cost or FVOCI, and recognizes provisions for guarantees and unused loan commitments through impairment testing. The accuracy of allowances and allowances for credit losses is determined by the estimation of expected cash flows for individually assessed allowances, and methodology and assumptions used for collectively assessed allowances and provisions for groups of loans, guarantees and unused loan commitments.

(d) Defined benefit obligation

The present value of a defined benefit obligation that is measured by actuarial valuation methods uses various assumptions which can change according to various elements. The rate used to discount post-employment benefit obligations is determined by reference to market yields at the end of the reporting period on high quality corporate bonds. The currency and term of the corporate bonds are consistent with the currency and estimated term of the post-employment benefit obligations. Actuarial gains and losses including experience adjustments and the effects of changes in actuarial assumptions are recognized in other comprehensive income. Other significant assumptions related to defined benefit obligations are based on current market situations.

(In millions of won)

6. Operating segments

(a) The general descriptions of the Group's operating segments as of December 31, 2018 and 2017 were as follows:

The Group has four reportable segments which are strategic business units. Each of these segments is providing different services and managed separately.

Description	Area of business
Retail banking	Loans to or deposits from individual customers, wealth management customers, and institutions such as hospitals, airports and schools.
Corporate banking	Loans to or deposits from corporations, including small or medium sized companies and businesses related to investment banking.
International group	Supervision of overseas subsidiaries and branch operations and other international businesses.
Others	Treasury management, trading of securities and derivatives, administration of bank operations and merchant banking account.

(b) The following table provides information of financial performance of each reportable segment for the years ended December 31, 2018 and 2017.

		2018					
		Retail banking	Corporate banking	International group	Others	Consolidation adjustments	Total
Net interest income	₩	3,162,566	1,627,502	629,038	163,899	2,989	5,585,994
Net fees and commission income (expense)		497,840	401,691	99,272	43,258	(5,528)	1,036,533
Net other expense (*1)		(2,353,192)	(464,361)	(289,296)	(349,919)	(1,073)	(3,457,841)
Operating income (expense)		1,307,214	1,564,832	439,014	(142,762)	(3,612)	3,164,686
Net non-operating income (expenses)		(49,087)	(17,592)	(1,871)	120,301	(69,056)	(17,305)
Share of loss of associates		-	-	-	-	(977)	(977)
Profit (loss) before income tax		1,333,374	1,566,381	437,143	(116,849)	(73,645)	3,146,404
Income tax expense		(255,584)	(314,966)	(101,848)	(184,651)	(9,993)	(867,042)
Profit (loss) for the year	₩	1,077,790	1,251,415	335,295	(301,500)	(83,638)	2,279,362
Attributable to:							
Equity holder of the Bank	₩	1,077,790	1,251,415	335,295	(301,500)	(83,951)	2,279,049
Non-controlling interests		-	-	-	-	313	313
	₩	1,077,790	1,251,415	335,295	(301,500)	(83,638)	2,279,362

(*1) Effects of hedging on net investments in foreign operations are included.

(In millions of won)

6. Operating segments (continued)

(b) The following table provides information of financial performance of each reportable operating segment for the years ended December 31, 2018 and 2017. (continued)

		2017					
		Retail banking	Corporate banking	International group	Others	Consolidation adjustments	Total
Net interest income (expense)	₩	2,823,851	1,418,209	462,686	290,274	(2,969)	4,992,051
Net fees and commission income (expense)		495,188	351,626	89,933	57,133	(2,805)	991,075
Net other expense (*1)(*2)		(2,296,934)	(619,909)	(132,132)	(706,533)	(21,904)	(3,777,412)
Operating income		1,022,105	1,149,926	420,487	(359,126)	(27,678)	2,205,714
Net non-operating income (expenses)		1,774	1,970	1,046	(45,173)	(7,539)	(47,922)
Share of profit of associates		-	-	-	-	1,306	1,306
Profit (loss) before income tax		1,023,879	1,151,896	421,533	(404,299)	(33,911)	2,159,098
Income tax expense (*2)		(140,915)	(165,589)	(85,590)	(47,971)	(6,719)	(446,784)
Profit (loss) for the year	₩	882,964	986,307	335,943	(452,270)	(40,630)	1,712,314
Attributable to:							
Equity holder of the Bank	₩	882,964	986,307	335,943	(452,270)	(40,871)	1,712,073
Non-controlling interests		-	-	-	-	241	241
	₩	882,964	986,307	335,943	(452,270)	(40,630)	1,712,314

(*1) Effects of hedging on net investments in foreign operations are included.

(In millions of won)

6. Operating segments (continued)

(c) The following table provides information of net interest income of each reportable operating segment from external consumers and net interest income (expenses) between operating segments for the years ended December 31, 2018 and 2017.

		2018					
		Retail banking	Corporate banking	International group	Others	Consolidation adjustments	Total
Net interest income of each operating segment from external consumers	₩	3,448,621	1,165,367	688,540	283,466	-	5,585,994
Net interest income (expenses) between operating segments		(286,055)	462,135	(59,502)	(119,567)	2,989	-

		2017					
		Retail banking	Corporate banking	International group	Others	Consolidation adjustments	Total
Net interest income of each operating segment from external consumers	₩	2,883,406	1,208,508	497,506	402,631	-	4,992,051
Net interest income (expenses) between operating segments		(59,555)	209,701	(34,820)	(112,357)	(2,969)	-

(d) Financial information of geographical area

i) The following table provides information of operating income from external consumers by geographical area for the years ended December 31, 2018 and 2017.

		Operating revenue		Operating expenses (*1)		Operating income	
		2018	2017	2018	2017	2018	2017
Domestic	₩	18,024,769	20,083,129	15,327,172	18,226,009	2,697,597	1,857,120
Overseas		1,706,942	1,157,064	1,239,853	808,470	467,089	348,594
	₩	19,731,711	21,240,193	16,567,025	19,034,479	3,164,686	2,205,714

(*1) As the accounting treatment for the acquisition of ANZ Retail business by Shinhan Bank Vietnam Co., Ltd. was completed, the amount was adjusted retrospectively.

ii) The following table provides information of non-current assets by geographical area as of December 31, 2018 and 2017.

		December 31, 2018 (*1)	December 31, 2017 (*1) (*2)
Domestic	₩	2,713,113	2,767,584
Overseas		188,821	186,166
	₩	2,901,934	2,953,750

(*1) Non-current assets as of December 31, 2018 and 2017 include property and equipment, intangible assets and investment properties.
(*2) As the accounting treatment for the acquisition of ANZ Retail business by Shinhan Bank Vietnam Co., Ltd. was completed, the amount was adjusted retrospectively.

(In millions of won)

7. Cash and due from banks

(a) Cash and due from banks as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Cash	₩	2,568,913	1,749,897
Deposits in won:			
Reserve deposits		2,094,612	8,503,968
Others		663,371	1,869,847
		2,757,983	10,373,815
Deposits in foreign currencies:			
Deposits		5,030,664	4,056,086
Time deposits		2,585,510	2,233,200
Others		221,992	263,370
		7,838,166	6,552,656
Allowance for impairment		(14,785)	(14,046)
	₩	13,150,277	18,662,322

(b) Restricted due from banks as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Deposits in won:			
Reserve deposits	₩	2,094,612	8,503,968
Others		620,308	1,841,602
		2,714,920	10,345,570
Deposits in foreign currencies:			
Deposits		1,150,767	741,175
Time deposits		30,748	26,517
Others		6,494	4,031
		1,188,009	771,723
	₩	3,902,929	11,117,293

(In millions of won)

8. Securities at fair value through profit or loss

Securities at FVTPL as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Debt securities:			
Government bonds	₩	776,979	855,848
Financial institution bonds		2,506,260	2,301,848
Corporate bonds		1,689,256	1,483,933
Bills bought		4,195,776	2,677,766
CMA		3,001,831	3,157,475
Beneficiary Certificate		2,347,090	-
Others		817,039	29,488
		15,334,231	10,506,358
Equity securities:			
Stocks		123,321	83,928
Beneficiary certificates		-	436,815
		123,321	520,743
Other:			
Gold/silver deposits		154,881	189,297
	₩	15,612,433	11,216,398

(In millions of won)

9. Derivatives

(a) The notional amounts of derivatives as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Foreign currency related			
Over the counter:			
Currency forwards	₩	126,084,358	86,940,859
Currency swaps		31,103,735	29,689,979
Currency options		1,942,878	1,156,619
		159,130,971	117,787,457
Exchange traded:			
Currency futures		33,543	48,213
		159,164,514	117,835,670
Interest rates related			
Over the counter:			
Interest rate swaps		28,827,452	26,310,593
		28,827,452	26,310,593
Exchange traded:			
Interest rate futures		294,777	400,159
Interest rate swaps (*1)		35,183,073	30,158,662
		35,477,850	30,558,821
		64,305,302	56,869,414
Equity related			
Over the counter:			
Equity options		344,550	426,915
		344,550	426,915
Exchange traded:			
Equity futures		29,514	5,871
Equity options		52,063	27,815
		81,577	33,686
		426,127	460,601
Commodity related			
Over the counter:			
Commodity forwards		157,416	128,955
		157,416	128,955
Hedge			
Fair value hedge:			
Interest rate swaps		9,377,731	7,948,422
Net investment hedge:			
Currency forwards		223,620	214,280
		9,601,351	8,162,702
	₩	233,654,710	183,457,342

(*1) The notional amount of derivatives which is settled in the 'Central Counter Party ("CCP")' system.

(In millions of won)

9. **Derivatives (continued)**

(b) Fair values of derivative instruments as of December 31, 2018 and 2017 were as follows:

		December 31, 2018		December 31, 2017	
		Assets	Liabilities	Assets	Liabilities
Foreign currency related					
Over the counter:					
Currency forwards	₩	847,778	778,233	1,597,789	1,433,300
Currency swaps		394,428	373,512	830,658	864,623
Currency options		7,651	12,273	11,601	12,070
		1,249,857	1,164,018	2,440,048	2,309,993
Interest rates related					
Over the counter:					
Interest rate swaps		191,343	133,152	148,685	160,828
		191,343	133,152	148,685	160,828
Equity related					
Over the counter:					
Equity options		145	509	4,444	1,545
		145	509	4,444	1,545
Exchange traded:					
Equity options		-	953	33	55
		145	1,462	4,477	1,600
Commodity related					
Over the counter:					
Commodity forwards		2,026	-	657	-
		2,026	-	657	-
Hedge					
Fair value hedge:					
Interest rate swaps		35,093	467,381	8,433	518,948
Net investment hedge:					
Currency forwards		5,994	5,572	1,790	1,567
		41,087	472,953	10,223	520,515
	₩	1,484,458	1,771,585	2,604,090	2,992,936

(In millions of won)

9. Derivatives (continued)

(c) Gain or loss on valuation of derivatives for the years ended December 31, 2018 and 2017 were as follows:

		2018		2017	
		Gain	Loss	Gain	Loss
Foreign currency related					
Over the counter:					
Currency forwards	₩	878,840	808,621	1,564,305	1,578,777
Currency swaps		454,604	490,414	1,289,089	1,215,008
Currency options		10,999	2,760	12,574	6,906
		1,344,443	1,301,795	2,865,968	2,800,691
Interest rates related					
Over the counter:					
Interest rate swaps		139,748	62,881	124,250	136,690
		139,748	62,881	124,250	136,690
Equity related					
Over the counter:					
Equity options		6,234	4,056	2,026	1,426
Exchange traded:					
Equity options		24	152	65	5
		6,258	4,208	2,091	1,431
Commodity related					
Over the counter:					
Commodity forwards		2,026	-	657	-
		2,026	-	657	-
Hedge					
Fair value hedge:					
Interest rate swaps		142,154	86,909	38,958	246,661
Net investment hedge:					
Currency forwards		-	2,483	3,580	4,232
		142,154	89,392	42,538	250,893
	₩	1,634,629	1,458,276	3,035,504	3,189,705

(In millions of won)

9. Derivatives (continued)

(d) Hedge accounting

i) Purpose of risk hedge and strategy

The Group transacts with derivative financial instruments to hedge its interest rate risk and currency risk arising from the assets and liabilities of the Group. The Group applies fair value hedge accounting that uses interest rate swaps to hedge fair value movements risk arising from changes in the market interest rates of the Korean won structured notes, foreign currency issued financial debentures, structured deposits in foreign currencies, foreign currency structured deposits and foreign currency investment receivables. In order to hedge the foreign exchange risk of the net investment from the overseas, the Group applies the net investment hedge accounting for foreign operations using non-derivative financial instruments.

ii) Nominal amounts and average hedge ratios for hedging instruments as of December 31, 2018 were as follows:

		1 year or less	1 year ~ 2 years or less	2 years ~ 3 years or less	3 years ~ 4 years or less	4 years ~ 5 years or less	More than 5 years	Total
Fair value hedges:								
Interest rate swaps	₩	110,000	687,632	723,177	657,254	715,584	6,484,084	9,377,731
Average hedge ratio		100%	100%	100%	100%	100%	100%	100%
Hedge of net investments in foreign operations:								
Currency forwards		223,620	-	-	-	-	-	223,620
Borrowings in foreign currencies		73,789	20,264	-	-	-	-	94,053
Debt securities issued in foreign currencies		40,933	219,860	31,512	534,588	271,698	-	1,098,591
	₩	338,342	240,124	31,512	534,588	271,698	-	1,416,264
Average hedge ratio		100%	100%	100%	100%	100%	-	100%

(e) Impact of hedge accounting on the consolidated financial statements

i) Impact on hedging instruments in the consolidated statement of financial position as of December 31, 2018 and consolidated statement of comprehensive income and consolidated statement of changes in equity for the year then ended was as follows:

				Consolidated statement of financial position				Consolidated statement of comprehensive income		
			Notional amounts	Derivative assets	Derivative liabilities	Borrowings	Debt securities issued	Net other operating expenses	Other comprehensive income (loss) for the year	Changes in fair value for the year
Fair value hedges										
Interest rate risk	Interest rate swaps	₩	9,377,731	35,093	467,381	-	-	79,635	-	55, 245
Hedge of net investments in foreign operations:										
Foreign exchange risk	Currency forwards		223,620	5,994	5,572	-	-	(3,765)	505	(3,260)
	Borrowings in foreign currencies		94,053	-	-	94,053	-	-	(7,401)	(7,401)
	Debt securities issued in foreign currencies		1,098,592	-	-	-	1,092,739	-	(28,983)	(28,983)
		₩	10,793,996	41,087	472,953	94,053	1,092,739	75,870	(35,879)	15,601

(In millions of won)

9. Derivatives (continued)

(e) Impact of hedge accounting on the consolidated financial statements (continued)

ii) Impact on hedged items in the consolidated statement of financial position as of December 31, 2018 and consolidated statement of comprehensive income and consolidated statement of changes in equity for the year then ended was as follows:

	Hedging instruments		Consolidated statement of financial position: Securities at FVOCI	Deposits	Debt securities issued	Consolidated statement of comprehensive income: Other comprehensive income for the year	Net other operating expenses	Changes in fair value for the year	Reserve of exchange differences on translation
Fair value hedges:									
Interest rate risk	Debt securities issued	₩	-	-	7,058,950	-	(357,232)	(47,772)	-
	Investment bonds		293,215	-	-	-	(2,832)	800	-
	Time deposits		-	1,814,109	-	-	(167,226)	(9,490)	-
Hedge of net investments in foreign operations:									
Foreign exchange risk	Net investments in foreign operations		-	-	-	35,879	-	(35,879)	138,416
		₩	293,215	1,814,109	7,058,950	35,879	(527,290)	(92,341)	138,416

iii) Gains (losses) on fair value hedged items and hedging instruments attributable to the hedged risk for the year ended December 31, 2018 were as follows:

		Gains on fair value hedges (hedged items)	Gains on fair value hedges (hedging instruments)	Hedge ineffectiveness recognized in profit or loss (*1)
Fair value hedges:				
Interest rate swaps	₩	(76,573)	79,635	3,062
Hedge of net investments in foreign operations:				
Foreign exchange risk		35,879	(39,644)	(3,765)
	₩	(40,694)	39,991	(703)

(*1) Recognized hedge ineffectiveness is included in other operating income and expenses in the consolidated statement of comprehensive income.

(In millions of won)

10. Loans

(a) Details of loans as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	
		Loans at amortized cost	Loans at FVOCI
Household loans	₩	112,594,439	-
Corporate loans		133,399,567	645,237
Public and other loans		2,729,075	-
Loans to banks		3,586,594	-
Credit card receivables		103,580	-
		252,413,255	645,237
Deferred loan origination costs and fees		496,263	-
		252,909,518	645,237
Less: Allowance for impairment		(1,675,712)	-
	₩	251,233,806	645,237

		December 31, 2017
Household loans	₩	103,724,329
Corporate loans		123,835,486
Public and other loans		2,203,307
Loans to banks		2,961,877
Credit card receivables		87,618
		232,812,617
Deferred loan origination costs and fees		426,096
		233,238,713
Less: Allowance for impairment		(1,506,557)
	₩	231,732,156

(In millions of won)

10. Loans (continued)

(b) Changes in allowance for impairment and book value

i) Changes in allowance for impairment for the years ended December 31, 2018 and 2017 were as follows:

		December 31, 2018															
					Loans												
		Due from banks			Household			Corporate			Others			Other assets			
		Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Total
Beginning balance (*1)	₩	14,026	1,023	-	71,220	119,469	138,537	420,080	555,531	544,904	13,042	3,108	3,925	22,325	2,298	2,300	1,911,788
Transfer to 12 month expected credit losses		261	(261)	-	44,654	(44,285)	(369)	47,190	(47,040)	(150)	438	(438)	-	258	(257)	(1)	-
Transfer to lifetime expected credit losses		(5)	5	-	(5,374)	10,910	(5,536)	(39,016)	75,175	(36,159)	(249)	252	(3)	(114)	124	(10)	-
Transfer to credit-impaired financial assets		-	-	-	(168)	(2,618)	2,786	(595)	(11,234)	11,829	(53)	(141)	194	(3)	(66)	69	-
Provision for (reversal of) allowance		(99)	(447)	-	(16,698)	(3,589)	157,882	(59,946)	(56,123)	208,896	894	3,553	10,790	(2,160)	83	677	243,713
Write-offs		-	-	-	-	-	(207,453)	-	-	(274,444)	-	-	(2,567)	-	-	(65)	(484,529)
Effect of discounting		-	-	-	-	-	-	-	-	(15,086)	-	-	-	-	-	-	(15,086)
Allowance related to loans transferred		-	-	-	-	(17)	(4,159)	-	(357)	(52,094)	-	-	(2,454)	-	(7)	(2,736)	(61,824)
Recoveries		-	-	-	-	-	49,222	-	-	62,337	-	-	847	-	-	547	112,953
Others (*2)		262	20	-	560	84	231	3,444	7,228	(5,196)	90	14	7	2,350	-	-	9,094
Ending balance	₩	14,445	340	-	94,194	79,954	131,141	371,157	523,180	444,837	14,162	6,348	10,739	22,656	2,175	781	1,716,109

(*1) The beginning balance was restated in accordance with K-IFRS No.1109.
(*2) Other changes were due to debt restructuring, debt-equity swap and foreign exchange rate.

(In millions of won)

10. Loans (continued)

(b) Changes in allowance for impairment and book value (continued)

i) Changes in allowance for impairment for the years ended December 31, 2018 and 2017 were as follows: (continued)

		2017					
			Loans				
		Due from banks	Household (*2)	Corporate	Others	Other assets	Total
Beginning balance	₩	15,738	286,220	1,153,613	16,051	25,896	1,497,518
Provision for (reversal of) allowance		(1,692)	138,928	339,452	5,015	630	482,333
Write-offs		-	(126,906)	(242,739)	(565)	(388)	(370,598)
Effect of discounting		-	-	(17,483)	-	-	(17,483)
Allowance related to loans transferred		-	(2,042)	(58,299)	(402)	-	(60,743)
Recoveries		-	41,108	74,446	35	493	116,082
Others (*1)		-	(1,174)	(98,701)	-	(379)	(100,254)
Ending balance	₩	14,046	336,134	1,150,289	20,134	26,252	1,546,855

(*1) Other changes were due to debt restructuring, debt-equity swap and foreign exchange rate.
(*2) During 2018, the accounting treatment for Shinhan Vietnam's acquisition of ANZ Retail Business Division was finalized. The Group retrospectively adjusted the provisional amount of the identifiable net assets recognised at the acquisition date. The retrospective adjustment details and the effect on the financial statements are given in Note 45.

(In millions of won)

10. Loans (continued)

(b) Changes in allowance for impairment and book value (continued)

ii) Changes in book value of due from banks, loans and other assets for the year ended December 31, 2018 were as follows:

	December 31, 2018															
				Loans												
	Due from banks			Household			Corporate			Others			Other assets			
	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Total
Beginning balance	₩ 16,562,220	364,251	-	96,289,682	7,168,246	266,402	104,824,273	17,479,091	926,327	4,752,669	487,039	13,094	9,048,043	54,931	4,181	258,240,449
Transfer to 12 month expected credit losses	13,815	(13,815)	-	3,344,109	(3,340,492)	(3,617)	3,478,038	(3,477,544)	(494)	71,331	(71,331)	-	14,068	(14,066)	(2)	-
Transfer to lifetime expected credit losses	(3,777)	3,777	-	(4,825,295)	4,840,362	(15,067)	(14,534,008)	14,582,658	(48,650)	(367,927)	367,931	(4)	(50,666)	50,677	(11)	-
Transfer to credit-impaired financial assets	-	-	-	(504,905)	(28,097)	533,002	(1,327,660)	(34,445)	1,362,105	(25,023)	(8,558)	33,581	(14,206)	(248)	14,454	-
Origination	5,499,513	-	-	35,343,577	-	-	67,962,815	-	-	5,300,176	-	-	10,762,919	-	-	124,869,000
Recoveries	(11,627,567)	(348,973)	-	(24,189,594)	(2,011,870)	(202,453)	(48,964,496)	(7,991,089)	(650,015)	(4,030,497)	(170,856)	(12,898)	(5,590,569)	(35,824)	(3,628)	(105,830,329)
Write-offs	-	-	-	-	-	(207,453)	-	-	(274,444)	-	-	(2,567)	-	-	(65)	(484,529)
Allowance related to loans transferred	-	-	-	-	(3,059)	(74,664)	-	(15,997)	(491,107)	-	-	(14,554)	-	(495)	(13,082)	(612,958)
Others (*1)	148,129	(1,424)	-	214,915	264	447	498,688	119,731	(24,209)	95,408	2,224	9	-	-	-	1,054,182
Ending balance	₩ 10,592,333	3,816	-	105,672,489	6,625,354	296,597	111,937,650	20,662,405	799,513	5,796,137	606,449	16,661	14,169,589	54,975	1,847	277,235,815

(*1) Other changes were due to debt restructuring, debt-equity swap and foreign exchange rate.

(In millions of won)

10. Loans (continued)

(c) Changes in deferred loan origination costs for the year ended December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Beginning balance (*1)	₩	426,523	376,821
Loan origination		269,788	214,996
Amortization		(200,049)	(165,721)
Ending balance	₩	496,263	426,096

(*1) The beginning balance for 2018 was restated in accordance with K-IFRS No.1109.

11. Securities at fair value through other comprehensive income and securities at amortized cost

(a) Details of securities at FVOCI and securities at amortized cost as of December 31, 2018 and available-for-sale financial assets and held-to-maturity financial assets as of December 31, 2017 were as follows:

		December 31, 2018
Securities at FVOCI:		
Debt securities:		
Government bonds	₩	7,712,975
Financial institutions bonds		15,404,298
Corporate bonds		8,318,273
		31,435,546
Equity securities:		
Stocks		438,570
Equity investments		4,232
		442,802
	₩	31,878,348
Securities at amortized cost:		
Debt securities:		
Government bonds	₩	11,695,562
Financial institutions bonds		929,756
Corporate bonds		4,129,043
Others		74,803
		16,829,164
Allowance for impairment		(4,764)
	₩	16,824,400

(In millions of won)

11. Securities at fair value through other comprehensive income and securities at amortized cost (continued)

(a) Details of securities at FVOCI and securities at amortized cost as of December 31, 2018 and available-for-sale financial assets and held-to-maturity financial assets as of December 31, 2017 were as follows: (continued)

		December 31, 2017
Available-for-sale financial assets:		
Debt securities:		
Government bonds	₩	6,074,937
Financial institutions bonds		15,777,732
Corporate bonds		8,094,699
Others		11,801
		29,959,169
Equity securities (*1):		
Stocks		600,523
Equity investments		275,653
Beneficiary certificates		1,660,196
		2,536,372
	₩	32,495,541
Held-to-maturity financial assets:		
Debt securities:		
Government bonds	₩	9,808,234
Financial institutions bonds		1,224,816
Corporate bonds		3,789,848
	₩	14,822,898

(*1) Equity securities with no quoted market prices in active markets and of which the fair value cannot be measured reliably was recorded at cost of ₩28,300 million as of December 31, 2017.

(In millions of won)

11. Securities at fair value through other comprehensive income and securities at amortized cost (continued)

(a) Details of securities at FVOCI and securities at amortized cost as of December 31, 2018 and details of available-for-sale financial assets and held-to-maturity financial assets as of December 31, 2017 were as follows: (continued)

Details of equity instruments designated at FVOCI as of December 31, 2018 were as follows:

		December 31, 2018
Marketable securities	₩	136,170
Non-marketable securities		302,400
Others		4,232
	₩	442,802

The Group designated the above equity instruments at FVOCI, in accordance with the Group's policy.

Cumulative net losses reclassified in equity upon disposition of equity securities for the year ended December 31, 2018 were ₩4,399 million.

(b) Gains and losses on sale of securities at FVOCI for the year ended December 31, 2018 and gains and losses on sale of available-for sale financial assets for the year ended December 31, 2017 were as follows:

		2018	2017
Gain on sale of securities at FVOCI	₩	18,049	-
Loss on sale of securities at FVOCI		(1,662)	-
Gain on sale of available-for-sale financial assets		-	217,585
Loss on sale of available-for-sale financial assets		-	(21,740)
	₩	16,387	195,845

The Group disposed equity instruments that are measured at FVOCI for debt-equity swap. At the time of disposal, fair value of equity instruments and cumulative net losses were ₩2,379 million and ₩4,399 million, respectively.

(c) There were no gains and losses on sale of securities at amortized cost for year ended December 31, 2018.

(In millions of won)

11. Securities at fair value through other comprehensive income and securities at amortized cost (continued)

(d) Changes in allowance for credit loss of securities at FVOCI and securities at amortized cost

i) Changes in allowance for credit loss of securities at FVOCI and securities at amortized cost for the year ended December 31, 2018 were as follows:

		Securities at FVOCI				Securities at amortized cost			
		12-month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total	12-month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total
Beginning balance (*1)	₩	15,161	1,938	-	17,099	5,353	2,232	-	7,585
Transfer to 12-month expected credit losses		-	-	-	-	-	-	-	-
Transfer to lifetime expected credit losses		(234)	234	-	-	-	-	-	-
Transfer to impaired financial assets		-	-	-	-	-	-	-	-
Provision (reversal)		11,615	(3,220)	-	8,395	1,093	(2,214)	-	(1,121)
Disposals		(5,223)	(229)	-	(5,452)	-	-	-	-
Others (*2)		(1,117)	1,639	-	522	(1,700)	-	-	(1,700)
Ending balance	₩	20,202	362	-	20,564	4,746	18	-	4,764

(*1) The beginning balance was restated in accordance with K-IFRS No.1109.
(*2) Other changes were due to foreign exchange rate changes, etc.

ii) The Group recognized impairment loss on available-for-sale financial assets amounted to ₩178,228 million for the year ended December 31, 2017.

(In millions of won)

11. Securities at fair value through other comprehensive income and securities at amortized cost (continued)

(e) Changes in book value of securities at FVOCI and securities at amortized cost for the year ended December 31, 2018 were as follows:

		Securities at FVOCI				Securities at amortized cost			
		12-month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total	12-month expected credit losses	Lifetime expected credit losses	Credit-impaired financial assets	Total
Beginning balance	₩	29,931,489	15,878	-	29,947,367	14,801,454	21,444	-	14,822,898
Transfer to 12-month expected credit losses		-	-	-	-	-	-	-	-
Transfer to lifetime expected credit losses		(26,187)	26,187	-	-	-	-	-	-
Transfer to impaired financial asset		-	-	-	-	-	-	-	-
Acquisitions		23,600,909	98,778	-	23,699,687	3,751,191	-	-	3,751,191
Disposals		(4,881,887)	(18,687)	-	(4,900,574)	-	-	-	-
Redemption		(18,199,108)	-	-	(18,199,108)	(1,846,929)	(3)	-	(1,846,932)
Others (*1)		904,500	(16,326)	-	888,174	100,974	1,033	-	102,007
Ending balance	₩	31,329,716	105,830	-	31,435,546	16,806,690	22,474	-	16,829,164

(*1) Other changes were due to foreign exchange rate changes, etc.

(In millions of won)

12. Property and equipment

(a) Details of property and equipment as of December 31, 2018 and 2017 were as follows:

		December 31, 2018		
		Acquisition cost	Accumulated depreciation	Book value
Land	₩	1,251,039	-	1,251,039
Buildings (*1)		852,029	(279,649)	572,380
Others		1,337,159	(1,146,166)	190,993
	₩	3,440,227	(1,425,815)	2,014,412

(*1) ₩494 million of government subsidy was deducted from book value.

		December 31, 2017		
		Acquisition cost	Accumulated depreciation	Book value
Land	₩	1,260,239	-	1,260,239
Buildings (*1)		845,742	(240,439)	605,303
Others		1,316,225	(1,125,892)	190,333
	₩	3,422,206	(1,366,331)	2,055,875

(*1) ₩666 million of government subsidy was deducted from book value.

(b) Changes in property and equipment for the years ended December 31, 2018 and 2017 were as follows:

		December 31, 2018			
		Land	Buildings	Others	Total
Beginning balance	₩	1,260,239	605,303	190,333	2,055,875
Acquisitions (*1)(*2)(*3)		-	11,558	82,757	94,315
Disposals and write-offs (*4)		(17,262)	(1,742)	(8,188)	(27,192)
Depreciation		-	(41,228)	(77,339)	(118,567)
Amounts transferred from (to) investment properties		6,529	(2,314)	-	4,215
Amounts transferred to non-current assets held for sale		(33)	(46)	-	(79)
Effects of foreign currency movements		1,566	849	3,430	5,845
Ending balance	₩	1,251,039	572,380	190,993	2,014,412

(*1) ₩6,319 million transferred from construction-in progress was included.
(*2) ₩1,810 million of provision for the asset retirement related to newly acquired assets was included.
(*3) ₩897 million among acquisition cost of others was accounted for as accounts payable.
(*4) ₩1,521 million of write-off was included.

(In millions of won)

12. Property and equipment (continued)

(b) Changes in property and equipment for the years ended December 31, 2018 and 2017 were as follows (continued):

		December 31, 2017			
		Land	Buildings	Others	Total
Beginning balance	₩	1,203,810	631,525	208,224	2,043,559
Acquisitions (*1)(*2)(*3)		1,460	22,938	62,371	86,769
Disposals and write-offs (*4)		(5,487)	(357)	(2,146)	(7,990)
Depreciation		-	(38,616)	(81,458)	(120,074)
Amounts transferred from investment properties		62,456	(5,392)	-	57,064
Amounts transferred from non-current assets held for sale		(1,815)	(3,521)	-	(5,336)
Effects of foreign currency movements		(185)	(1,274)	3,342	1,883
Ending balance	₩	1,260,239	605,303	190,333	2,055,875

(*1) ₩14,285 million transferred from construction-in progress was included.
(*2) ₩1,761 million of provision for the asset retirement related to newly acquired assets was included.
(*3) ₩538 million from acquisition of retail business of ANZ Vietnam was included. (Note 45)
(*4) ₩847 million of write-off was included.

(c) Insured assets and liability insurances as of December 31, 2018 were as follows:

Type of insurance	Insured assets		Amount covered	Insurance company
Comprehensive insurance for financial institutions	Cash & securities	₩	20,000	Samsung Fire & Marine Insurance Co., Ltd.
Property insurance	Real estate & movable properties for business purpose		893,955	Samsung Fire & Marine Insurance Co., Ltd., etc.
Burglary insurance	Cash & securities		60,000	Samsung Fire & Marine Insurance Co., Ltd., etc.
Compensation liability insurance for officers	-		50,000	Meritz Fire & Marine Insurance Co., Ltd., etc.
Compensation liability insurance for gas accident	Real estate		500	Meritz Fire & Marine Insurance Co., Ltd.
Compensation liability insurance for personal information protection	-		10,000	Samsung Fire & Marine Insurance Co., Ltd.
Compensation liability insurance for electronic financial transaction	-		2,000	DB Insurance Co., Ltd., etc.
Compensation liability insurance for casualty	Real estate		1,000	Samsung Fire & Marine Insurance Co., Ltd.
		₩	1,037,455	

Besides the insurances listed above, the Group also has automobile liability insurance, medical insurance for employees, and casualty insurance for protecting property and employees.

(In millions of won)

13. Intangible assets

(a) Changes in intangible assets for the years ended December 31, 2018 and 2017 were as follows:

		December 31, 2018					
		Goodwill	Software	Development cost	Memberships(*3)	Others	Total
Beginning balance	₩	73,374	49,117	43,416	46,916	86,756	299,579
Acquisitions (*1)		-	36,867	18,020	4,286	35,157	94,330
Disposals		-	-	-	(2,619)	-	(2,619)
Amortization (*2)		-	(26,401)	(14,937)	-	(36,127)	(77,465)
Effects of foreign currency movements		-	3,681	-	14	(1,291)	2,404
Ending balance	₩	73,374	63,264	46,499	48,597	84,495	316,229

(*1) ₩1,047 million among acquisition cost of other intangible assets was accounted for as accounts payable.
(*2) ₩33,573 million among amortization cost of other intangible assets was included in other operating expenses.

		December 31, 2017					
		Goodwill	Software	Development cost	Memberships	Others	Total
Beginning balance	₩	45,175	60,113	32,162	46,833	76,283	260,566
Acquisitions (*1)(*2)		28,199	13,171	22,904	4,977	54,982	124,233
Disposals		-	-	-	(4,788)	(245)	(5,033)
Amortization (*3)		-	(24,564)	(11,650)	-	(44,237)	(80,451)
Effects of foreign currency movements		-	397	-	(106)	(27)	264
Ending balance (*4)	₩	73,374	49,117	43,416	46,916	86,756	299,579

(*1) Goodwill was recognized as a result of acquisition of ANZ Vietnam retail business.
(*2) ₩5,061 million among acquisition cost of other intangible assets was accounted for as accounts payable.
(*3) ₩41,570 million among amortization cost of other intangible assets was included in other operating expenses.
(*4) As the accounting treatment for the acquisition of ANZ Vietnam retail business by Shinhan Vietnam was finalized, the amount was adjusted retrospectively.

(In millions of won)

13. Intangible assets (continued)

(b) Goodwill

i) The carrying amounts of goodwill allocated to each Cash-Generating Unit ("CGU") as of December 31, 2018 and 2017 were as follows:

CGU		December 31, 2018	December 31, 2017
PT Bank Shinhan Indonesia	₩	45,175	45,175
Shinhan Bank Vietnam Co., Ltd. (*1)		28,199	28,199
	₩	73,374	73,374

(*1) On December 17, 2017, Shinhan Bank Vietnam Co., Ltd. acquired the retail business of ANZ Vietnam in an effort to increase business competitiveness and a synergy effect in the banking business in Vietnam. As of December 31, 2017, management was in the process of performing identification of intangible assets and valuation of identifiable assets and liabilities for allocation of acquisition costs. The amount was retrospectively restated as the accounting treatment for business combinations was finalized during the year ended December 31, 2018. (Note 45)

ii) Impairment test

The recoverable amounts of CGUs are determined on the basis of value-in-use calculations using discounted cash flow (DCF) model.

Impairment test results on goodwill of PT Bank Shinhan Indonesia and Shinhan Bank Vietnam Co., Ltd. were as follows:

ⓐ Measurement date and projection period

The recoverable amounts are measured as of June 30, 2018. The projection period used in value-in-use calculations is 5.5 years (July 2018 through December 2023) considering synergy effect of business combinations and the value-in-use after projection period is estimated on the assumption that the future cash flows will increase by perpetual growth rate for every year.

ⓑ Significant assumptions

The expected future cash flows from the cash-generating unit are based on the CPI growth rate, market size and the market share of the Group. Major unobservable assumptions applied during the forecast period are as follows:

(Unit: %)

Cash-generating units	Net interest income growth rate	Net commission income growth rate	General administrative expenses growth rate	Net income growth rate
PT Bank Shinhan Indonesia	15.18	22.13	13.29	18.19
Shinhan Bank Vietnam Co., Ltd.	2.68	6.00	7.14	(-)0.61

(In millions of won)

13. Intangible assets (continued)

(b) Goodwill (continued)

ⓑ Significant assumptions (continued)

The cost of equity capital is calculated by taking into account the systematic risk of the company in the market risk premium paid in return for risk free rate. Permanent growth rate was estimated based on inflation and did not exceed the projected long-term average growth rate of the relevant industry report.

(Unit: %)

Cash-generating units	Discount rate	Permanent growth rate
PT Bank Shinhan Indonesia	12.20	2.90
Shinhan Bank Vietnam Co., Ltd.	13.80	2.90

ⓒ Significant assumptions

The carrying amounts and recoverable amounts of the CGUs to which goodwill has been allocated as of valuation date were as follows:

		PT Bank Shinhan Indonesia	Shinhan Bank Vietnam Co., Ltd.
Recoverable amount	₩	450,967	717,953
Carrying amount		407,628	617,057
Recoverable amount in excess of carrying amount	₩	43,339	100,896

As a result of the impairment test of goodwill, the recoverable amounts of the CGUs to which goodwill is allocated exceeded the carrying amounts, therefore no impairment is recognized.

(In millions of won)

14. Investment in associates

(a) Investments in associates as of December 31, 2018 and 2017 were as follows:

Investees	Location	Reporting date	Ownership (%) December 31, 2018	Ownership (%) December 31, 2017
BNP Paribas Cardif Life Insurance Co., Ltd.(*1)(*2)	Korea	September 30	14.99	14.99
Daewontos Co., Ltd. (*3)(*4)	Korea	December 31	36.33	36.33
Inhee Co., Ltd.	Korea	-	-	15.36
DAEGY Electrical Construction Co., Ltd. (*3)(*4)	Korea	September 30	27.45	27.45
YEONWOONG SYSTEM (*1)(*3)	Korea	December 31	21.77	21.77
DOODOO LOGITECH (*1)(*3)	Korea	September 30	27.96	27.96
Neoplux Technology Valuation Investment Fund (*1)	Korea	September 30	33.33	33.33
JAEYOUNG SOLUTEC CO., LTD. (*5)	Korea	-	-	9.61
Partners 4th Growth Investment Fund (*1)	Korea	September 30	25.00	25.00
KTB Newlake Global Healthcare PEF (*1)	Korea	September 30	20.00	20.00
Jaeyang Industry (*3)(*4)	Korea	March 31	25.90	25.90
Tigris-Aurum Fund 1 (*1)	Korea	September 30	27.27	27.27
Chungyoung INC.	Korea	-	-	18.94
DAEKWANG SEMICON DUCTOR Co., Ltd. (*1)(*3)	Korea	September 30	20.94	20.94
Branbuil Co., Ltd.	Korea	-	-	15.53
Songrim Co., Ltd. (*1)(*3)	Korea	September 30	35.34	35.34
Taihan Industrial System Co., Ltd. (*1)(*3)	Korea	September 30	28.29	28.29
Hyungje art printing (*3)	Korea	September 30	31.54	-
ICSF (The Korea's Information Center for Savings & Finance) (*4)	Korea	December 31	32.26	32.26
Shinhan-Albatross Technology Investment Fund	Korea	December 31	33.33	3.33
Loggia	Korea	-	-	16.29
Quantum-Nvestor Fund No.1 (*5)	Korea	-	-	16.67
Lodestone 1st Private Equity Fund	Korea	-	-	17.53
Miraeequity-Incus Venture Business Fund No.4 (*1)	Korea	September 30	23.53	23.53
LB Technology Fund 1	Korea	-	-	18.52
Shinhan-Neoplux Energy Newbiz Fund (*1)	Korea	September 30	23.33	23.33
Stassets-DA Value Healthcare Fund I (*6)	Korea	September 30	24.10	-

14. Investments in associates (continued)

(a) Investments in associates as of December 31, 2018 and 2017 were as follows (continued):

(*1) Financial statements as of September 30, 2018 were used for the equity method accounting since the financial statements as of December 31, 2018 were not available. Significant trades and events occurred within the period were properly reflected.
(*2) The Group used equity method accounting as the Group has significant influence over the investee through significant operating transactions.
(*3) The shares of the investees were acquired by debt-equity swap. The Group reclassified available-for-sale financial assets to investments in associates as the reorganization procedures were completed and now the Group can normally exercise its voting rights to the investees.
(*4) The latest financial statements available were used for the equity method accounting since the financial statements as of December 31, 2018 were not available. Significant trades and events occurred within the period were properly reflected.
(*5) These investees were sold and excluded from associates during the year ended December 31, 2018.
(*6) The Group newly acquired these associates during the year ended December 31, 2018.

(In millions of won)

14. Investments in associates (continued)

(b) Changes in investments in associates for the years ended December 31, 2018 and 2017 were as follows:

		December 31, 2018								
Associates		Acquisition cost	Beginning balance	Acquisition (redemption)	Gain (loss) from disposal	Share of profit (loss) of associates	Share of other comprehensive income (loss) of associates	Dividends received	Impairment loss	Ending balance
BNP Paribas Cardif Life Insurance Co., Ltd.	₩	35,279	52,652	-	-	771	(1,540)	(2,042)	-	49,841
Daewontos Co., Ltd.		-	-	-	-	-	-	-	-	-
Inhee Co., Ltd. (*1)		-	205	-	(205)	-	-	-	-	-
DAEGY Electrical Construction Co., Ltd.		-	109	-	-	-	-	-	-	109
YEONWOONG SYSTEM		-	77	-	-	(1)	-	-	-	76
DOODOO LOGITECH		-	163	-	-	(119)	-	-	-	44
Neoplux Technology Valuation Investment Fund		17,068	13,470	6,000	-	(242)	(490)	-	-	18,738
JAEYOUNG SOLUTEC CO., LTD.		6,238	3,848	(9,375)	6,500	(836)	(137)	-	-	-
Partners 4th Growth Investment Fund		17,722	13,390	2,596	-	626	-	-	-	16,612
KTB Newlake Global Healthcare PEF		162	1,769	4,980	-	(159)	-	-	-	6,590
Jaeyang Industry		-	-	-	-	-	-	-	-	-
Tigris-Aurum Fund 1		1,500	1,436	-	-	(45)	-	-	-	1,391
Chungyoung INC.		-	-	-	-	-	-	-	-	-
DAEKWANG SEMICON DUCTOR Co., Ltd.		4,776	3,824	-	-	(490)	-	-	-	3,334
Branbuil Co., Ltd. (*1)		183	-	(163)	163	-	-	-	-	-
Songrim Co., Ltd.		11	48	-	-	(48)	-	-	-	-
Taihan Industrial System Co., Ltd.		-	-	-	-	-	-	-	-	-
ICSF (The Korea's Information Center for Savings & Finance)		300	156	-	-	(7)	-	-	-	149
Shinhan-Albatross Technology Investment Fund		4,000	1,782	4,000	-	(146)	306	-	-	5,942
Loggia		37	26	-	(26)	-	-	-	-	-
Quantum-Nvestor Fund No.1 (*1)		1,000	993	(1,000)	738	-	-	(731)	-	-
Lodestone 1st Private Equity Fund (*1)		2,000	1,991	(2,170)	179	-	-	-	-	-
Miraeequity-Incus Venture Business Fund No.4		2,000	1,997	-	-	(40)	-	-	-	1,957
LB Technology Fund 1 (*1)		1,000	1,000	(820)	(180)	-	-	-	-	-
Shinhan-Neoplux Energy Newbiz Fund		1,400	1,400	2,800	-	(226)	-	-	-	3,974
Stassets-DA Value Healthcare Fund I		1,000	-	1,000	-	(15)	-	-	-	985
	₩	95,676	100,336	7,848	7,169	(977)	(1,861)	(2,773)	-	109,742

(*1) Redemption represents disposal amounts by reclassification without any cash flows.

(In millions of won)

14. Investments in associates (continued)

(b) Changes in investments in associates for the years ended December 31, 2018 and 2017 were as follows: (continued)

	December 31, 2017									
Associates		Acquisition cost	Beginning balance	Acquisition (redemption)	Gain (loss) from disposal	Share of profit (loss) of associates	Share of other comprehensive income (loss) of associates	Dividends received	Impairment loss	Ending balance
Aju Capital Co., Ltd.	₩	36,971	40,836	(62,507)	22,748	438	334	(1,849)	-	-
BNP Paribas Cardif Life Insurance Co., Ltd.		35,279	60,268	-	-	3,663	(11,024)	(255)	-	52,652
Pohang TechnoPark 2PFV		4,470	1,975	(4,470)	2,472	-	23	-	-	-
Daewontos Co., Ltd.		-	-	-	-	-	-	-	-	-
Inhee Co., Ltd.		-	215	-	-	(10)	-	-	-	205
DAEGY Electrical Construction Co., Ltd.		-	128	-	-	(19)	-	-	-	109
YEONWOONG SYSTEM		-	77	-	-	-	-	-	-	77
DOODOO LOGITECH		-	247	-	-	(84)	-	-	-	163
Neoplux Technology Valuation Investment Fund		13,068	7,526	5,400	-	1,564	490	(1,510)	-	13,470
EQP Global Energy Infrastructure Private Equity Fund		280	-	(280)	280	-	-	-	-	-
JAEYOUNG SOLUTEC CO., LTD. (*1)		6,238	5,736	-	-	(2,009)	121	-	-	3,848
Partners 4th Growth Investment Fund		14,100	4,555	9,220	-	(385)	-	-	-	13,390
PSA 1st Fintech Private Equity Fund		2,000	1,965	(2,000)	211	(38)	-	(138)	-	-
KTB Newlake Global Healthcare PEF		162	779	1,134	-	(144)	-	-	-	1,769
Jaeyang Industry		-	-	-	-	-	-	-	-	-
Tigris-Aurum Fund 1		1,500	1,481	-	-	(45)	-	-	-	1,436
Treenkid		92	79	-	(79)	-	-	-	-	-
Chungyoung INC.		-	-	-	-	-	-	-	-	-
Semantic		249	249	-	213	(462)	-	-	-	-
DAEKWANG SEMICON DUCTOR Co., Ltd.		4,776	4,777	-	-	(952)	-	-	-	3,825
Branbuil Co., Ltd.		183	-	-	-	-	-	-	-	-
Songrim Co., Ltd.		11	-	11	-	37	-	-	-	48
Taihan Industrial System Co., Ltd.		-	-	-	-	-	-	-	-	-
ICSF (The Korea's Information Center for Savings & Finance)		300	-	300	-	-	-	-	(144)	156
Shinhan-Albatross Technology Investment Fund		2,000	-	2,000	-	(218)	-	-	-	1,782
Loggia		37	-	37	-	(11)	-	-	-	26
Quantum-Nvestor Fund No.1		1,000	-	1,000	-	(7)	-	-	-	993

(In millions of won)

14. Investments in associates (continued)

(b) Changes in investments in associates for the years ended December 31, 2018 and 2017 were as follows: (continued)

		December 31, 2017								
Associates		Acqui-sition cost	Beginning balance	Acqui-sition (redemp-tion)	Gain (loss) from disposal	Share of profit (loss) of associates	Share of other comprehe-nsive income (loss) of associates	Dividends received	Impair-ment loss	Ending balance
Lodestone 1st Private Equity Fund	₩	2,000	-	2,000	-	(8)	(1)	-	-	1,991
Miraeequity-Incus Venture Business Fund No.4		2,000	-	2,000	-	(4)	-	-	-	1,996
LB Technology Fund 1		1,000	-	1,000	-	-	-	-	-	1,000
Shinhan-Neoplux Energy Newbiz Fund		1,400	-	1,400	-	-	-	-	-	1,400
	₩	129,116	130,893	(43,755)	25,845	1,306	(10,057)	(3,752)	(144)	100,336

(*1) The market value of the investments in associates was ₩6,826 million as of December 31, 2017 based on the quoted market price as of December 28, 2017.

(In millions of won)

14. Investments in associates (continued)

(c) The condensed financial statements of associates as of December 31, 2018 and 2017 were as follows:

	December 31, 2018						
Associates		Assets	Liabilities	Operating revenue	Profit (loss) for the year	Other comprehensive income (loss)	Total comprehensive income (loss)
BNP Paribas Cardif Life Insurance Co., Ltd.	₩	3,995,746	3,662,567	53,756	5,191	(10,268)	(5,077)
Daewontos Co., Ltd.		400	2,492	-	-	-	-
DAEGY Electrical Construction Co., Ltd.		590	193	-	-	-	-
YEONWOONG SYSTEM		492	147	-	(6)	-	(6)
DOODOO LOGITECH		204	45	536	(427)	-	(427)
Neoplux Technology Valuation Investment Fund		57,018	804	390	(724)	(1,969)	(2,693)
Partners 4th Growth Investment Fund		67,403	954	4,424	3,025	-	3,025
KTB Newlake Global Healthcare PEF		32,508	123	69	(793)	-	(793)
Jaeyang Industry		2,146	4,717	-	-	-	-
Tigris-Aurum Fund 1		5,142	42	-	(165)	-	(165)
DAEKWANG SEMICON DUCTOR Co., Ltd.		25,459	9,537	15,794	(2,341)	-	(2,341)
Songrim Co., Ltd.		2,288	2,311	1,898	(164)	-	(164)
Taihan Industrial System Co., Ltd.		12,317	13,478	48,457	433	-	433
Hyungje art printing		1,020	1,139	2,688	(1,171)	-	(1,171)
ICSF (The Korea's Information Center for Savings & Finance)		703	241	102	(22)	-	(22)
Shinhan-Albatross Technology Investment		18,009	182	299	(435)	917	482
Miraeequity-Incus Venture Business Fund No.4		8,358	43	-	(171)	-	(171)
Shinhan-Neoplux Energy Newbiz Fund		17,347	315	19	(968)	-	(968)
Stassets-DA Value Healthcare Fund I		4,089	1	1	(62)	-	(62)
	₩	4,251,239	3,699,331	128,433	1,200	(11,320)	(10,120)

(In millions of won)

14. Investments in associates (continued)

(c) Condensed financial statements of associates as of December 31, 2018 and 2017 were as follows: (continued)

		December 31, 2017					
Associates		Assets	Liabilities	Operating revenue	Profit (loss) for the year	Other comprehensive income (loss)	Total comprehensive income (loss)
BNP Paribas Cardif Life Insurance Co., Ltd.	₩	4,133,674	3,781,688	78,010	24,230	(73,495)	(49,265)
Daewontos Co., Ltd.		400	2,492	-	-	-	-
Inhee Co., Ltd.		10,019	8,678	4,685	(62)	-	(62)
DAEGY Electrical Construction Co., Ltd.		590	193	17	(57)	-	(57)
YEONWOONG SYSTEM		498	147	39	1	-	1
DOODOO LOGITECH		624	39	339	(271)	-	(271)
Neoplux Technology Valuation Investment Fund		40,692	283	5,895	4,691	1,471	6,162
JAEYOUNG SOLUTEC CO., LTD.		157,009	137,916	142,228	(22,756)	2,764	(19,992)
Partners 4th Growth Investment Fund		53,944	383	137	(1,540)	-	(1,540)
KTB Newlake Global Healthcare PEF		8,796	517	-	(719)	-	(719)
Jaeyang Industry		2,146	4,717	-	-	-	-
Tigris-Aurum Fund 1		5,308	42	-	(165)	-	(165)
Chungyoung INC.		3,292	8,392	5,568	(693)	-	(693)
DAEKWANG SEMICON DUCTOR Co., Ltd.		29,069	10,806	13,929	(4,549)	-	(4,549)
Branbuil Co., Ltd.		1,944	2,451	-	-	-	-
Songrim Co., Ltd.		4,854	4,718	5,485	106	-	106
Taihan Industrial System Co., Ltd.		13,226	14,820	25,306	(1,112)	-	(1,112)
ICSF (The Korea's Information Center for Savings & Finance)		484	1	322	(20)	-	(20)
Shinhan-Albatross Technology Investment		5,527	182	37	(655)	-	(655)
Loggia		1,208	1,046	955	(68)	-	(68)
Quantum-Nvestor Fund No.1		5,989	31	2	(42)	-	(42)
Lodestone 1st Private Equity Fund		11,456	-	37	(46)	(8)	(54)
Miraeequity-Incus Venture Business Fund No.4		8,500	15	-	(15)	-	(15)
LB Technology Fund 1		5,400	-	-	-	-	-
Shinhan-Neoplux Energy Newbiz Fund		6,000	-	-	-	-	-
	₩	4,510,649	3,979,557	282,991	(3,742)	(69,268)	(73,010)

(In millions of won)

14. Investments in associates (continued)

(d) Reconciliation of associates' financial information presented to the carrying amount of the Group's interest in the associates as of December 31, 2018 and 2017 were as follows:

		December 31, 2018					
Associates		Net assets (A)	Proportion of ownership interest (B)	(A) x (B)	Unrealized income and expenses	Other adjustments	Carrying amount
BNP Paribas Cardif Life Insurance Co., Ltd.	₩	333,178	14.99%	49,977	(136)	-	49,841
Daewontos Co., Ltd. (*1)		(2,092)	36.33%	(760)	-	760	-
DAEGY Electrical Construction Co., Ltd.		397	27.45%	109	-	-	109
YEONWOONG SYSTEM		345	21.77%	76	-	-	76
DOODOO LOGITECH		158	27.96%	44	-	-	44
Neoplux Technology Valuation Investment Fund		56,214	33.33%	18,738	-	-	18,738
Partners 4th Growth Investment Fund		66,449	25.00%	16,612	-	-	16,612
KTB Newlake Global Healthcare PEF (*2)		32,385	20.00%	6,477	-	113	6,590
Jaeyang Industry (*3)		(2,571)	25.90%	(666)	-	666	-
Tigris-Aurum Fund 1		5,101	27.27%	1,391	-	-	1,391
DAEKWANG SEMICON DUCTOR Co., Ltd.		15,922	20.94%	3,334	-	-	3,334
Songrim Co., Ltd. (*3)		(23)	35.34%	(8)	-	8	-
Taihan Industrial System Co., Ltd. (*2)		(1,161)	28.29%	(328)	-	328	-
Hyungje art printing (*3)		(119)	31.54%	(38)	-	38	-
ICSF (The Korea's Information Center for Savings & Finance)		462	32.26%	149	-	-	149
Shinhan-Albatross Technology Investment Fund		17,827	33.33%	5,942	-	-	5,942
Miraeequity-Incus Venture Business Fund No.4		8,316	23.53%	1,957	-	-	1,957
Shinhan-Neoplux Energy Newbiz Fund		17,032	23.33%	3,974	-	-	3,974
Stassets-DA Value Healthcare Fund I		4,089	24.10%	985	-	-	985
	₩	551,909		107,965	(136)	1,913	109,742

14. Investments in associates (continued)

(d) Reconciliation of associates' financial information presented to the carrying amount of the Group's interest in the associates as of December 31, 2018 and 2017 were as follows: (continued)

(*1) Other adjustments represent the unrecognized share of accumulated losses resulting from the Group's discontinuing the use of equity method since its interest was reduced to zero by the accumulated losses of the investee.
(*2) Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable assets and liabilities on acquisition of the investment.
(*3) Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable net assets on acquisition of the investment as well as the unrecognized share of accumulated losses resulting from the Group's discontinuing the use of equity method since its interest was reduced to zero by the accumulated losses of the investee.

(In millions of won)

14. Investments in associates (continued)

(d) Reconciliation of associates' financial information presented to the carrying amount of the Group's interest in the associates as of December 31, 2018 and 2017 were as follows: (continued)

		December 31, 2017					
Associates		Net assets (A)	Proportion of ownership interest (B)	(A) x (B)	Unrealized income and expenses	Other adjustments	Carrying amount
BNP Paribas Cardif Life Insurance Co., Ltd.	₩	351,986	14.99%	52,798	(146)	-	52,652
Daewontos Co., Ltd. (*1)		(2,092)	36.33%	(760)	-	760	-
Inhee Co., Ltd.		1,341	15.36%	205	-	-	205
DAEGY Electrical Construction Co., Ltd.		397	27.45%	109	-	-	109
YEONWOONG SYSTEM		351	21.77%	77	-	-	77
DOODOO LOGITECH		585	27.96%	163	-	-	163
Neoplux Technology Valuation Investment Fund		40,409	33.33%	13,470	-	-	13,470
JAEYOUNG SOLUTEC CO., LTD. (*2)		17,484	9.61%	1,679	-	2,169	3,848
Partners 4th Growth Investment Fund		53,561	25.00%	13,390	-	-	13,390
KTB Newlake Global Healthcare PEF (*3)		8,279	20.00%	1,656	-	113	1,769
Jaeyang Industry (*4)		(2,571)	25.90%	(666)	-	666	-
Tigris-Aurum Fund 1		5,266	27.27%	1,436	-	-	1,436
Chungyoung INC. (*4)		(5,100)	18.94%	(966)	-	966	-
DAEKWANG SEMICON DUCTOR Co., Ltd.		18,263	20.94%	3,825	-	-	3,825
Branbuil Co., Ltd. (*3)		(507)	15.53%	(79)	-	79	-
Songrim Co., Ltd.		136	35.34%	48	-	-	48
Taihan Industrial System Co., Ltd. (*3)		(1,594)	28.29%	(451)	-	451	-
ICSF (The Korea's Information Center for Savings & Finance)		483	32.26%	156	-	-	156
Shinhan-Albatross Technology Investment Fund		5,345	33.33%	1,782	-	-	1,782
Loggia		162	16.29%	26	-	-	26
Quantum-Nvestor Fund No.1		5,958	16.67%	993	-	-	993
Lodestone 1st Private Equity Fund		11,456	17.38%	1,991	-	-	1,991
Miraeequity-Incus Venture Business Fund No.4		8,485	23.53%	1,996	-	-	1,996
LB Technology Fund 1		5,400	18.52%	1,000	-	-	1,000
Shinhan-Neoplux Energy Newbiz Fund		6,000	23.33%	1,400	-	-	1,400
	₩	529,483		95,278	(146)	5,204	100,336

(In millions of won)

14. Investments in associates (continued)

(d) Reconciliation of associates' financial information presented to the carrying amount of the Group's interest in the associates as of December 31, 2018 and 2017 were as follows: (continued)

(*1) Other adjustments represent the unrecognized share of accumulated losses resulting from the Group's discontinuing the use of equity method since its interest was reduced to zero by the accumulated losses of the investee.
(*2) Net assets do not include non-controlling interests. Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable assets and liabilities on acquisition of the investment.
(*3) Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable assets and liabilities on acquisition of the investment.
(*4) Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable net assets on acquisition of the investment as well as the unrecognized share of accumulated losses resulting from the Group's discontinuing the use of equity method since its interest was reduced to zero by the accumulated losses of the investee.

(e) The unrecognized equity method losses and accumulated unrecognized equity losses for the years ended December 31, 2018 and 2017 are as follows :

		2018	
		Unrecognized equity method loss	Accumulated unrecognized equity method loss
Daewontos Co., Ltd.	₩	-	(760)
Jaeyang industry Co., Ltd.		-	(18)
Songrim Co., Ltd		(8)	(8)
Total	₩	(8)	(786)

		2017	
		Unrecognized equity method loss	Accumulated unrecognized equity method loss
Daewontos Co., Ltd.	₩	-	(760)
Jaeyang industry Co., Ltd.		-	(18)
Chungyoung INC.		(130)	(130)
Total	₩	(130)	(908)

(In millions of won)

15. Investment properties

(a) Investment properties as of December 31, 2018 and 2017 were as follows:

		December 31, 2018		
		Acquisition cost	Accumulated depreciation	Book value
Land	₩	417,994	-	417,994
Buildings		222,848	(69,549)	153,299
	₩	640,842	(69,549)	571,293

		December 31, 2017		
		Acquisition cost	Accumulated depreciation	Book value
Land	₩	435,722	-	435,722
Buildings		223,216	(60,642)	162,574
	₩	658,938	(60,642)	598,296

(b) Fair value of investment properties as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Investment properties (*1)	₩	605,107	686,811

(*1) Fair value of investment properties is estimated based on the recent market transactions and certain significant unobservable inputs. Accordingly, fair value of investment properties is classified as level 3.

(c) Income and expenses on investment properties for the years ended December 31, 2018 and 2017 were as follows

		2018	2017
Rental income	₩	27,559	25,169
Direct operating expenses for investment properties that generate rental income		5,736	5,600

(In millions of won)

16. Other assets

Other assets as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Unsettled trades and accounts receivable	₩	5,865,729	4,120,125
Domestic exchange settlement receivables		5,992,383	2,871,934
Guarantee deposits		1,020,548	1,024,763
Accrued income		1,290,791	1,051,311
Prepaid expense		104,076	99,179
Suspense payments		69,600	60,032
Sundry assets		125,668	92,178
Others		2,799	2,243
Present value discount		(36,355)	(42,434)
Allowance for impairment		(25,612)	(26,252)
	₩	14,409,627	9,253,079

17. Non-current assets held for sale

(a) Non-current assets held for sale as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Property and equipment	₩	7,561	7,534

The Group classified property and equipment which were highly expected to be sold within one year from December 31, 2018, as non-current assets held for sale.

(b) The cumulative income or loss recognized in other comprehensive income

There were no cumulative income or loss recognized in other comprehensive income relating to non-current assets held for sale as of December 31, 2018 and 2017.

(In millions of won)

18. Pledged assets

(a) Assets pledged as collateral as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Loans:			
Loans at amortized cost	₩	129,210	-
Loans		-	99,158
Securities (*1):			
Securities at FVOCI		411,371	-
Securities at amortized cost		10,565,279	-
Available-for-sale financial assets		-	595,373
Held-to-maturity financial assets		-	10,346,611
		10,976,650	10,941,984
Property and equipment (*2)		5,784	5,592
	₩	11,111,644	11,046,734

(*1) The carrying amounts of assets pledged as collateral that the transferees had the right to sell or repledge regardless of the Group's default as of December 31, 2018 and 2017 were ₩684,013 million and ₩909,195 million, respectively.
(*2) The amounts were based on the notification amount of pledge.

(b) The fair value of collateral held that the Group has the right to sell or repledge regardless of pledger's default as of December 31, 2018 and 2017 were as follows:

		December 31, 2018		December 31, 2017	
		Collateral held	Collateral sold or repledged	Collateral held	Collateral sold or repledged
Securities	₩	5,190,387	-	3,749,516	-

(In millions of won)

19. Financial liabilities designated at fair value through profit or loss

(a) There were no financial liabilities designated at FVTPL as of December 31, 2018 and 2017.

(b) There was no net gain or loss on financial liabilities designated at FVTPL for the year ended December 31, 2018. Net losses on financial liabilities designated at FVTPL for the year ended December 31, 2017 were as follows:

		2017
Deposits:		
Loss on transaction	₩	(43)

20. Deposits

Deposits as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Demand deposits:			
Korean won	₩	92,939,482	89,453,125
Foreign currencies		12,058,823	12,289,606
		104,998,305	101,742,731
Time deposits:			
Korean won		119,544,345	112,021,376
Foreign currencies		16,109,446	13,945,457
Gain on fair value hedge		(167,226)	(179,053)
		135,486,565	125,787,780
Negotiable certificates of deposits		9,213,652	7,478,278
Note discount deposits		4,087,530	3,423,459
CMA		4,084,709	4,197,146
Others		21,963	24,350
	₩	257,892,724	242,653,744

(In millions of won)

21. Financial liabilities at fair value through profit or loss

(a) Financial liabilities at FVTPL as of December 31, 2018 and trading liabilities as of December 31, 2017 were as follows:

	December 31, 2018			December 31, 2017		
	Interest rate (%)		Amount	Interest rate (%)		Amount
Securities sold	2.75	₩	20,625	-	₩	-
Gold/silver deposits	-		458,934	-		434,586
		₩	479,559		₩	434,586

(b) Net gain (loss) on financial liabilities at FVTPL for the year ended December 31, 2018 and net gain (loss) on trading liabilities for the year ended December 31, 2017 were as follows:

		2018	2017
Securities sold:			
Gain on sale	₩	231	691
Loss on sale		(384)	(1,277)
Gain on valuation		27	-
Loss on valuation		(28)	-
		(154)	(586)
Gold/silver deposits:			
Gain on sale		1,611	2,834
Loss on sale		(217)	(395)
Gain on valuation		293	436
Loss on valuation		(15,185)	(176)
		(13,498)	(2,699)
	₩	(13,652)	2,113

(In millions of won)

22. Borrowings

Borrowings as of December 31, 2018 and 2017 were as follows:

	December 31, 2018		December 31, 2017	
	Interest rate (%)	Amount	Interest rate (%)	Amount
Call money:				
Korean won	1.73	₩ 120,000	-	₩ -
Foreign currencies	0.00~6.85	840,162	0.00~6.20	561,813
		960,162		561,813
Bill sold	0.75~1.70	14,536	0.65~1.63	13,605
Bonds sold under repurchase agreements:				
Korean won	1.82	1,027	0.00	903
Foreign currencies	2.63~6.50	82,001	1.69~6.00	296,696
		83,028		297,599
Borrowings in Korean won:				
Borrowings from Bank of Korea	0.50~0.75	2,288,991	0.50~0.75	2,873,706
Others	0.00~4.25	6,561,883	0.00~4.25	5,769,260
		8,850,874		8,642,966
Borrowings in foreign currencies:				
Overdraft due to banks	0.00	77,673	0.00	128,634
Borrowings from banks	0.00~9.20	4,576,198	0.24~9.25	3,737,367
Sub-lease	0.00~3.34	84,017	0.00~2.15	240,380
Others	2.60~7.90	1,510,190	1.45~7.90	995,366
		6,248,078		5,101,747
Deferred origination costs		(1,857)		(168)
		₩ 16,154,821		₩ 14,617,562

(In millions of won)

23. Debt securities issued

Debt securities issued as of December 31, 2018 and 2017 were as follows:

	December 31, 2018			December 31, 2017		
	Interest rate (%)		Amount	Interest rate (%)		Amount
Debt securities issued in Korean won:						
Debt securities issued	0.00~8.00	₩	23,425,572	0.00~8.00	₩	18,861,594
Subordinated debt securities issued	2.20~4.60		3,200,145	2.20~4.60		3,000,400
Gain on fair value hedges			(206,985)			(274,046)
Discount on debt securities issued			(62,944)			(29,698)
			26,355,788			21,558,250
Debt securities issued in foreign currencies:						
Debt securities issued	0.02~4.01		3,356,032	0.00~4.20		2,504,859
Subordinated debt securities issued	3.75~5.00		2,271,799	3.75~3.88		1,446,390
Gain on fair value hedges			(55,251)			(25,795)
Discount on debt securities issued			(29,102)			(23,277)
			5,543,478			3,902,177
		₩	31,899,266		₩	25,460,427

(In millions of won)

24 Defined benefit liabilities (assets)

(a) Defined benefit plan assets and liabilities

The Group provides a defined benefit plan for qualified employees. Plan assets are managed by trust companies, funds, and other similar companies that are subject to local regulations and each country's business environment.

Defined benefit plan assets and liabilities as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Present value of defined benefit obligations	₩	1,370,151	1,263,698
Fair value of plan assets		(1,299,502)	(1,294,013)
Defined benefit liabilities (assets)	₩	70,649	(30,315)
Defined benefit assets	₩	-	34,120
Defined benefit liabilities		70,649	3,805

(b) Changes in the present value of defined benefit obligations for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Beginning balance	₩	1,263,698	1,258,473
Current service cost		104,538	128,079
Interest expense		44,471	40,998
Remeasurements (*1)(*2)		65,504	(106,466)
Effects of foreign currency movements		(853)	67
Benefits paid by the plan		(106,995)	(65,624)
Others		(213)	5,361
Past service cost		-	2,810
Ending balance	₩	1,370,151	1,263,698

(*1) Remeasurements for the year ended December 31, 2018 consist of ₩18,399 million of actuarial loss arising from changes in demographic assumptions, ₩54,933 million of actuarial loss arising from changes in financial assumptions and ₩7,828 million of actuarial gain arising from changes in experience adjustments, respectively.
(*2) Remeasurements for the year ended December 31, 2017 consist of ₩4,929 million of actuarial loss arising from changes in demographic assumptions, ₩78,228 million of actuarial gain arising from changes in financial assumptions and ₩33,167 million of actuarial gain arising from changes in experience adjustments, respectively.

(c) Changes in the fair value of plan assets for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Beginning balance	₩	1,294,013	1,208,370
Interest income		50,725	41,085
Remeasurements		(31,570)	(21,188)
Contributions paid into the plan		92,000	120,000
Benefits paid by the plan		(105,666)	(54,254)
Ending balance	₩	1,299,502	1,294,013

(In millions of won)

24. Defined benefit liabilities (assets) (continued)

(d) The amount of major categories of the fair value of plan assets as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Deposits	₩	1,281,069	1,275,313
Others		18,433	18,700
	₩	1,299,502	1,294,013

(e) Actuarial assumptions as of December 31, 2018 and 2017 were as follows:

	December 31, 2018	December 31, 2017	Descriptions
Discount rate	3.18%	3.92%	AA0 Corporate bond yields
Future salary increasing rate	2.33% + Upgrade rate	2.63% + Upgrade rate	Average for last 5 years

(f) Sensitivity analysis

Sensitivity analysis of the present value fluctuations of defined benefit obligations as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	
		Change in present value when the factor rises by 100 basis points	Change in present value when the factor falls by 100 basis points
Discount rate	₩	(121,918)	140,734
Future salary increasing rate		137,918	(120,557)

		December 31, 2017	
		Change in present value when the factor rises by 100 basis points	Change in present value when the factor falls by 100 basis points
Discount rate	₩	(109,226)	125,770
Future salary increasing rate		126,331	(111,638)

(g) The maturity analysis of undiscounted retirement benefit payments as of the end of the current term is as follows

		1 year or less	1 year~ 2 years or less	2 years~ 5 years or less	5 years~ 10 years or less	More than 5 years	Total
Salary payment amount	₩	58,231	80,625	277,853	395,171	1,094,529	1,906,409

(h) The weighted average durations of defined benefit obligations as of December 31, 2018 and 2017 were 9.90 years and 9.33 years, respectively.

(In millions of won)

25. Provisions

(a) Changes in provisions for unused credit commitments and financial guarantee contracts issued for the year ended December 31, 2018 were as follows:

		2018						
		Loan commitments and other liabilities for credit			Financial guarantee contracts			
			Lifetime expected credit losses			Lifetime expected credit losses		
		12-month expected credit losses	Credit-unimpaired financial asset	Credit-impaired financial asset	12-month expected credit losses	Credit-unimpaired financial asset	Credit-impaired financial asset	Total
Beginning balance	₩	69,350	17,341	-	30,338	3,346	2,464	122,839
Transfer to 12-month expected credit losses		2,929	(2,929)	-	1,139	(1,139)	-	-
Transfer to lifetime expected credit losses		(2,605)	2,605	-	(1,804)	1,804	-	-
Transfer to impaired financial asset		-	-	-	(13)	-	13	-
Provision (reversal)		(3,586)	(800)	-	(3,226)	455	(690)	(7,847)
Foreign exchange movements		719	105	-	757	481	449	2,511
Others (*2)		-	-	-	27,237	940	(479)	27,698
Ending balance	₩	66,807	16,322	-	54,428	5,887	1,757	145,201

(*1) The beginning balance was restated in accordance with K-IFRS No.1109.

(*2) Other changes were mainly due to newly issued financial guarantee contracts recognized at their fair values, termination, effect of discount rate changes, etc.

(In millions of won)

25. Provisions (continued)

(b) Changes in provisions for the years ended December 31, 2018 and 2017 were as follows:

		2018				
		Asset retirement	Litigation	Non-financial guarantee contracts	Others	Total
Beginning balance	₩	30,874	11,850	46,340	43,567	132,631
Provision (reversal)		6,474	(971)	(2,833)	3,583	6,253
Provision used		(2,388)	(5,492)	-	(6,467)	(14,347)
Foreign exchange movements		-	386	1,677	(1,006)	1,057
Others (*1)		1,810	-	(1,713)	13,824	13,921
Ending balance	₩	36,770	5,773	43,471	53,501	139,515

(*1) Other changes were mainly due to newly issued financial guarantee contracts recognized at their fair values, termination, effect of discount rate changes, etc.

		2017					
		Asset retirement	Litigation	Unused credit	Guarantee	Others	Total
Beginning balance	₩	36,098	12,044	94,985	78,499	85,305	306,931
Provision (reversal)		(4,853)	423	(787)	2,084	(20,222)	(23,355)
Provision used		(2,132)	-	-	-	(21,464)	(23,596)
Foreign exchange movements		-	(617)	(3,483)	(4,458)	(52)	(8,610)
Others (*1)		1,761	-	2,526	3,666	-	7,953
Ending balance	₩	30,874	11,850	93,241	79,791	43,567	259,323

(*1) Other changes were due to originations and maturities of financial guarantees recognized initially at their fair value, effect of discount rate change and acquisition cost of new leased properties relating to asset retirement.
(*2) During 2018, the accounting treatment for Shinhan Vietnam's acquisition of ANZ retail business division was finalized. The Group retrospectively adjusted the provisional amount of the identifiable net assets recognised at the acquisition date. The retrospective adjustment details and the effect on the financial statements are given in Note 45.

(c) Asset retirement obligation liabilities represent the estimated cost to restore the existing leased properties which were discounted to the present value using the appropriate discount rate at the end of the reporting period. Disbursements of such costs were expected to incur at the end of the lease contract. Such costs were reasonably estimated using the average lease period and the average restoration expenses. The average lease period was calculated based on the past ten-year historical data of the expired leases. The average restoration expense was calculated based on the actual costs incurred for the past three years using the three-year average inflation rate.

(In millions of won)

26. Other liabilities

Other liabilities as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Accounts payable	₩	5,847,048	4,162,381
Borrowing from trust account		2,994,798	4,052,608
Accrued expenses		2,631,797	2,444,803
Liability incurred by agency relationship		1,306,075	935,016
Domestic exchange settlement payables		1,016,256	1,683,449
Account for agency business of other institutions		720,171	600,774
Security deposits received		355,867	602,613
Foreign exchange settlement payables		225,921	223,436
Suspense payable		73,426	77,495
Unearned income		96,975	87,953
Withholding value-added tax and other taxes		119,190	88,222
Dividend payable		2,597	1,367
Sundry liabilities		46,845	57,773
Present value discount		(2,118)	(2,913)
	₩	15,434,848	15,014,977

(In millions of won, except for share data)

27. Equity

(a) Equity as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Capital stock:			
Common stock	₩	7,928,078	7,928,078
Other equity instruments:			
Hybrid bonds		698,660	668,938
Capital surplus:			
Share premium		398,080	398,080
Others		5,084	5,084
		403,164	403,164
Capital adjustments:			
Stock options		4,850	782
Others		(4,204)	(4,089)
		646	(3,307)
Accumulated other comprehensive income (loss):			
Net change in fair value of financial assets at FVOCI		(21,118)	-
Net change in fair value of available-for-sale financial assets		-	46,841
Share of other comprehensive income of associates, net		4,859	6,586
Foreign currency translation differences for foreign operations		(313,003)	(337,163)
Remeasurements of defined benefit plans		(277,435)	(207,036)
		(606,697)	(490,772)
Retained earnings:			
Legal reserve (*1)		1,835,854	1,675,077
Voluntary reserve (*2)		10,930,547	10,065,795
Other reserve (*3)		112,058	99,681
Unappropriated retained earnings (*4)(*5)		2,884,292	2,300,992
		15,762,751	14,141,465
Non-controlling interests		5,937	5,298
	₩	24,192,539	22,652,863

(*1) According to *the Article 40 of the Banking Act*, the Bank is required to appropriate an amount equal to a minimum of 10% of cash dividends paid for each accounting period as a legal reserve, until such reserve equals 100% of issued capital. The legal reserve is only available to reduce accumulated deficit or transfer to capital stock.

(*2) The amounts include regulatory reserve for loan loss based on separate financial statements of ₩1,842,655 million and ₩1,754,773 million as of December 31, 2018 and 2017, respectively. The amounts also include asset revaluation surplus of ₩355,898 million as of December 31, 2018 and 2017, respectively.

(*3) Other reserve was established according to the laws applicable to some oversea branches and it may be used only to reduce their deficit.

(*4) The amounts include difference between the regulatory reserve for loan loss based on separate financial statement and the regulatory reserve for loan loss based on consolidated financial statement of ₩5,602 million and ₩26,074 million as of December 31, 2018 and 2017, respectively. Provision for regulatory reserve for loan losses are ₩113,243 million and ₩113,956 million for the years ended December 31, 2018 and 2017, respectively.

(*5) As the accounting treatment for the acquisition of ANZ retail business by Shinhan Vietnam was finalized in 2018, the ending balance for 2017 was retroactively adjusted.

(In millions of won, except for share data)

27. Equity (continued)

(b) Capital stock

Capital stock of the Bank as of December 31, 2018 and 2017 were as follows:

	December 31, 2018	December 31, 2017
Number of authorized shares	2,000,000,000 shares	2,000,000,000 shares
Par value per share in won	₩5,000	₩5,000
Number of issued shares outstanding	1,585,615,506 shares	1,585,615,506 shares

(c) Hybrid bonds

Hybrid bonds as of December 31, 2018 and 2017 were as follows:

Date of issuance	Date of maturity		Book value December 31, 2018	Book value December 31, 2017	Interest rate (%)
Hybrid bonds issued in Korean won:					
March 21, 2008	March 21, 2038	₩	-	119,878	7.30
March 25, 2008	March 25, 2038		-	49,947	7.30
June 7, 2013	June 7, 2043		299,568	299,568	4.63
June 29, 2017	Perpetual bond		129,701	129,701	3.33
June 29, 2017	Perpetual bond		69,844	69,844	3.81
October 15, 2018	Perpetual bond		199,547	-	3.70
		₩	698,660	668,938	
Dividends on hybrid bond holders		₩	25,228	29,857	
Weighted average interest rate (%)			4.36	5.23	

The above hybrid bonds are subject to early redemption option after five years or ten years from the date of issuance, and the maturity can be extended under the same condition at the maturity date. In addition, if no dividend is paid for common shares, the agreed interest is also not paid.

During the year ended December 31, 2018, ₩169,825 million of hybrid bonds issued in March 2008 were repaid early.

(In millions of won, except for share data)

27. Equity (continued)

(d) Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2018 and 2017 were as follows:

	2018							
		Items that are or may be reclassified to profit or loss			Items that will not be reclassified to profit or loss			
		Net change in fair value of financial assets at FVOCI	Share of other comprehensive income (loss) of associates, net	Foreign currency translation differences for foreign operations	Net change in fair value of financial assets at FVOCI	Share of other comprehensive income (loss) of associates, net	Remeasurements of the defined benefit plans	Total
Beginning balance (*1)	₩	(70,683)	6,614	(334,281)	(58,379)	(28)	(207,036)	(663,793)
Change due to fair value		135,350	-	-	21,151	-	-	156,501
Change due to other comprehensive income of associates		-	(1,579)	-	-	25	-	(1,554)
Change due to impairment		3,467	-	-	-	-	-	3,467
Change due to disposal		11,910	(286)	-	-	-	-	11,624
Effect of hedge accounting		(2,365)	-	(35,879)	-	-	-	(38,244)
Effect of foreign currency movements		-	-	47,227	423	-	-	47,650
Remeasurements of defined benefit plans		-	-	-	-	-	(97,076)	(97,076)
Amounts transferred to retained earnings		-	-	-	(4,399)	13	-	(4,386)
Effect of tax		(52,713)	110	9,930	(4,880)	(10)	26,677	(20,886)
Ending balance	₩	24,966	4,859	(313,004)	(46,084)	-	(277,435)	(606,697)

(*1) The beginning balance was restated in accordance with K-IFRS No.1109.

(In millions of won)

27. Equity (continued)

(d) Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2018 and 2017 were as follows: (continued)

		2017				
		Net change in fair value of available-for-sale financial assets	Share of other comprehensive income (loss) of associates, net	Foreign currency translation differences for foreign operations	Remeasure-ments of defined benefit plans	Total
Beginning balance	₩	139,824	16,583	(151,936)	(280,916)	(276,445)
Change due to fair value		(44,185)	-	-	-	(44,185)
Change due to other comprehensive income of associates		-	(10,043)	-	-	(10,043)
Change due to impairment		38,383	-	-	-	38,383
Change due to disposal		(119,348)	(!4)	-	-	(119,362)
Effect of hedge accounting		1,241	-	97,353	-	98,594
Effect of foreign currency movements		(7,113)	-	(267,693)	-	(274,806)
Remeasurements of defined benefit plans		-	-	-	84,994	84,994
Amounts transferred from retained earnings		-	414	-	-	414
Effect of tax		38,039	(354)	(14,887)	(11,114)	11,684
Ending balance	₩	46,841	6,586	(337,163)	(207,036)	(490,772)

(In millions of won, except for par value per share and dividend per share)

27. Equity (continued)

(e) Statements of appropriation of retained earnings for the years ended December 31, 2018 and 2017 were as follows:

		2018 Expected date of approval: March 26, 2019	2017 Date of approval: March 21, 2018
Unappropriated retained earnings:			
Balance at beginning of year	₩	-	-
Net effect on change due to accounting policy		(90,616)	-
Transfer from other comprehensive income through the sale of securities at FVOCI		(3,189)	-
Interest on hybrid bond		(25,228)	(29,857)
Profit for the year		2,116,606	1,607,761
		1,997,573	1,577,904
Transfer from reserves:			
Voluntary reserve		8,453,145	7,676,276
Regulatory reserve for loan loss		-	-
		8,453,145	7,676,276
		10,450,718	9,254,180
Appropriation of retained earnings:			
Legal reserve		211,661	160,776
Regulatory reserve for loan loss		118,844	87,882
Other reserve		11,139	12,377
Voluntary reserves		9,218,899	8,453,145
Loss on redemption of hybrid bond		175	-
Dividends on common stock (Dividend per share in won: 2018 ₩561.30 (11.23%) 2017 ₩340.56 (6.81%)		890,000	540,000
		10,450,718	9,254,180
Unappropriated retained earnings to be carried over to subsequent year	₩	-	-

These statements of appropriation of retained earnings were based on the separate financial statements of the Bank.

(f) Dividends

Dividends of common stock for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Number of issued shares outstanding		1,585,615,506	1,585,615,506
Par value per share in won	₩	5,000	5,000
Dividend rate per share		11.23%	6.81%
Dividend per share in won	₩	561.30	340.56

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(In millions of won, except for earnings per share)

27. Equity (continued)

(g) Dividends payout ratio

Dividends payout ratio for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Dividends	₩	890,000	540,000
Profit for the year (*1)		2,279,049	1,712,073
Dividends payout ratio to profit for the year		39.05%	31.54%
Profit for the year adjusted for regulatory reserve (*1)(*2)		1,962,108	1,598,117
Dividends payout ratio to profit for the year adjusted for regulatory reserve for loan loss		45.36%	33.79%

(*1) Profit for the year and profit for the year adjusted for regulatory reserve for loan loss were the amount attributable to equity holder of the Bank.
(*2) As the accounting treatment for the acquisition of ANZ retail business by Shinhan Vietnam was finalized, the amount was adjusted retrospectively.

28. Regulatory reserve for loan loss

The Group should calculate and disclose regulatory reserve for loan loss, in accordance with *the Article 29-1 and 29-2 of Regulation on Supervision of Banking Business.*

(a) The regulatory reserve for loan loss as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Regulatory reserve for loan loss	₩	1,902,647	1,788,691
Provision for regulatory reserve for loan loss		113,243	113,956
	₩	2,015,890	1,902,647

(b) Profit for the year adjusted for regulatory reserve for loan loss and earnings per share adjusted for regulatory reserve for loan loss for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Provision for regulatory reserve for loan loss (*1)	₩	316,941	113,956
Profit for the year adjusted for regulatory reserve for loan loss		1,962,421	1,598,358
Earnings per share adjusted for regulatory reserve in won		1,222	989

(*1) The amount for the year ended December 31, 2018 was calculated based on the regulatory reserve for loan loss that retroactively reflects the effect of adoption of K-IFRS No.1109.

(In millions of won)

29. Net interest income

(a) Net interest income for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Interest income:			
Cash and due from banks	₩	106,633	89,829
Loans (*1)		8,197,418	6,948,483
Securities at FVTPL		221,569	-
Securities at FVOCI		607,771	-
Securities at amortized cost		403,707	-
Trading assets		-	181,653
Available-for-sale financial assets		-	487,712
Held-to-maturity financial assets		-	355,696
Others		59,627	60,028
		9,596,725	8,123,401
Interest expense: (*2)			
Deposits		(3,007,294)	(2,411,147)
Borrowings		(292,048)	(207,404)
Debt securities issued		(640,708)	(490,006)
Others		(70,681)	(22,793)
		(4,010,731)	(3,131,350)
Net interest income	₩	5,585,994	4,992,051

(*1) The amounts include an interest income from loans at FVTPL of ₩12,462 million for the year ended December 31, 2018.
(*2) There were no interest expense from financial liabilities at FVTPL for the years ended December 31, 2018 and 2017.

(b) Interest income recognized on impaired financial assets for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Interest income	₩	15,086	16,371

(In millions of won)

30. Net fees and commission income

Net fees and commission income for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Fees and commission income:			
Credit placement fees	₩	54,672	55,124
Commission received as electronic charge receipt		145,874	141,646
Brokerage fees		97,928	107,773
Commission received as agency		323,796	324,489
Investment banking fees		71,095	53,621
Commission received in foreign exchange activities		189,017	179,567
Asset management fees from trust accounts		192,422	166,189
Guarantee fees		69,729	60,825
Others		113,219	94,640
		1,257,752	1,183,874
Fees and commission expense:			
Credit-related fees		(35,006)	(34,105)
Brand-related fees		(34,769)	(32,757)
Service-related fees		(25,748)	(17,450)
Trading and brokerage fees		(9,430)	(8,040)
Commission paid in foreign exchange activities		(38,722)	(32,258)
Others		(77,544)	(68,189)
		(221,219)	(192,799)
Net fees and commission income	₩	1,036,533	991,075

31. Dividend income

Dividend income for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Securities at fair value through profit or loss	₩	3,905	-
Securities at fair value through other comprehensive income		11,757	-
Trading assets		-	27,942
Available-for-sale financial assets		-	72,574
	₩	15,662	100,516

(In millions of won)

32. Gain and loss on financial instruments at fair value through profit or loss

Gain and loss on financial instruments at FVTPL for the year ended December 31, 2018 and net trading loss for the year ended 2017 were as follows:

		2018
Financial instruments at FVTPL		
Debt:		
Gain on valuation of debt securities	₩	101,439
Gain on sale of debt securities		52,642
Loss on valuation of debt securities		(38,178)
Loss on sale of debt securities		(44,726)
Others		71,308
		142,485
Equity:		
Gain on valuation of equity securities		25,778
Gain on sale of equity securities		31,564
Loss on valuation of equity securities		(13,080)
Loss on sale of equity securities		(17,900)
		26,362
Gold/silver:		
Gain on valuation of gold/silver deposits		19,667
Gain on sale of gold/silver deposits		1,611
Loss on valuation of gold/silver deposits		(15,473)
Loss on sale of gold/silver deposits		(217)
		5,588
Loans at FVTPL		
Gain on valuation of loans		5,292
Gain on sale of loans		12,181
Loss on valuation of loans		(1,225)
Loss on sale of loans		(2,420)
		13,828
		188,263
Derivatives		
Foreign currency related:		
Gain on valuation and transaction		5,855,531
Loss on valuation and transaction		(5,682,626)
		172,905
Interest rates related:		
Gain on valuation and transaction		453,291
Loss on valuation and transaction		(450,679)
		2,612
Equity related:		
Gain on valuation and transaction		20,203
Loss on valuation and transaction		(10,863)
		9,340
Commodity related:		
Gain on valuation and transaction		5,532
Loss on valuation and transaction		(20,141)
		(14,609)
		170,248
Net gain on financial instruments at FVTPL	₩	358,511

(In millions of won)

32. Gain and loss on financial instruments at fair value through profit or loss (continued)

Gain and loss on financial instruments at FVTPL for the year ended December 31, 2018 and net trading loss for the year ended 2017 were as follows: (continued)

		2017
Trading assets and trading liabilities		
Debt:		
Gain on valuation of debt securities	₩	1,577
Gain on sale of debt securities		15,214
Loss on valuation of debt securities		(36,934)
Loss on sale of debt securities		(19,779)
		(39,922)
Equity:		
Gain on valuation of equity securities		6,689
Gain on sale of equity securities		23,385
Loss on valuation of equity securities		(7,509)
Loss on sale of equity securities		(13,056)
		9,509
Gold/silver:		
Gain on valuation of gold/silver deposits		6,735
Gain on sale of gold/silver deposits		2,834
Loss on valuation of gold/silver deposits		(693)
Loss on sale of gold/silver deposits		(395)
		8,481
		(21,932)
Derivatives		
Foreign currency related:		
Gain on valuation and transaction		7,424,307
Loss on valuation and transaction		(7,617,205)
		(192,898)
Interest rates related:		
Gain on valuation and transaction		486,280
Loss on valuation and transaction		(455,420)
		30,860
Equity related:		
Gain on valuation and transaction		7,326
Loss on valuation and transaction		(8,722)
		(1,396)
Commodity related:		
Gain on valuation and transaction		24,855
Loss on valuation and transaction		(4,387)
		20,468
		(142,966)
Net trading loss	₩	(164,898)

(In millions of won)

33. General and administrative expenses

General and administrative expenses for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Employee benefits:			
Short and long term employee benefits	₩	1,787,842	1,751,542
Post-employee defined benefits		98,284	130,802
Post-employee defined contributions		154	133
Termination benefits		90,484	224,033
		1,976,764	2,106,510
Amortization:			
Depreciation		118,567	120,074
Amortization of intangible assets		43,887	38,880
		162,454	158,954
Other general and administrative expenses:			
Rent		283,430	256,233
Service contract expenses		252,445	234,418
Taxes and dues		84,094	76,187
Advertising		74,262	60,338
Electronic data processing expenses		58,096	56,954
Others		170,241	168,463
		922,568	852,953
	₩	3,061,786	3,118,057

(In millions of won, except for exercise price and fair value)

34. Share-based payments

(a) Stock options as of December 31, 2018 were as follows:

	4th grant	5th grant	6th grant	7th grant
Grant date	March 30, 2005	March 21, 2006	March 20, 2007	March 19, 2008
Exercise price in won (*1)	₩28,006	₩38,829	₩54,560	₩49,053
Number of shares granted	1,903,200	2,157,600	715,500	332,850
Contractual exercise period	2017.05.18 ~ 2018.08.30	2017.05.18 ~ 2019.08.21	2017.05.18 ~ 2020.08.19	2017.5.18 ~ 2021.5.17 2017.9.18 ~ 2021.9.17
Changes in number of shares granted:				
Outstanding at December 31, 2017	93,426	101,963	50,513	26,233
Exercised	90,926	99,463	-	-
Outstanding at December 31, 2018 (*2)	-	2,500	50,513	26,233
Fair value in won (*3)	-	2,874	397	Expiration date 2021.5.17 : 1,441 Expiration date 2021.9.17 : 1,610

(*1) As of December 31, 2018, the granted shares were fully vested, and the weighted-average exercise price of 79,246 options outstanding was ₩52,241.
(*2) As of December 31, 2018, 4,759 rights of exercise for 7th grant were suspended, and the fair value of the current suspended grants are zero.
(*3) As of December 31, 2018, the fair value consists of intrinsic value and time value, and suspended grants were evaluated based on the intrinsic value, which is the difference between the closing price of Shinhan Financial Group and the exercise price.

(b) Equity-settled share-based payments

i) Equity-settled share-based payments as of December 31, 2018 were as follows:

	Contents	
Grant year	2010 ~ 2013	2014~
Type (*1)	Equity-settled share-based payment	Equity-settled share-based payment
Service period	Upon appointment and promotion since April 1, 2010 (Within 3 years from grant date)	Upon appointment and promotion since January 1, 2014 (Within 1 year from grant date)
Performance conditions (*2)	Increase rate of stock price and achievement of target ROE	Increase rate of stock price and achievement of target ROE

(*1) The Group granted shares of Shinhan Financial Group. According to the commitment, the amount that the Group must pay to the Shinhan Financial Group was recognized in liabilities, and the difference between the amount recognized in liabilities and the compensation cost based on equity-settled share-based payments was recognized in equity.

(*2) ROE: Return on Equity

(In millions of won, except for fair value and share data)

34. Share-based payments (continued)

(b) Equity-settled share-based payments (continued)

ii) Granted shares and the fair value of grant date as of December 31, 2018 were as follows:

Grant date	Grant shares	Fair value (*1) (in won)	Estimated shares (*2)
April 1, 2010	306,400	45,150	10,471
January 1, 2014	109,800	47,300	2,364
January 1, 2015	159,000	44,500	148,882
March 18, 2015	16,800	42,650	12,610
April 10, 2015	2,300	40,350	1,591
May 1, 2015	2,300	46,000	1,466
May 22, 2015	5,300	42,800	3,097
May 27, 2015	2,300	40,200	1,314
August 1, 2015	2,300	41,900	958
August 24, 2015	2,300	40,250	785
January 1, 2016	221,900	39,000	212,366
January 1, 2017	221,300	45,300	187,467
January 23, 2017	2,700	45,600	2,421
March 7, 2017	17,400	46,950	13,600
March 24, 2017	8,100	49,000	5,961
June 1, 2017	2,700	49,250	1,493
July 5, 2017	2,700	49,550	1,251
July 6, 2017	2,700	49,200	1,244
January 1, 2018	227,500	49,400	207,228
	1,315,800		816,569

(*1) The fair value per share was evaluated based on the closing price of Shinhan Financial Group at each grant date. As of December 31, 2018, the fair value per share data evaluated by Shinhan Financial Group amounted to ₩39,600.

(*2) Grant shares at grant date were adjusted pursuant to increase rate of stock price (33.4% to 2013, 20.0% after 2014) and achievement of target ROE (66.6% to 2013, 80.0% after 2014) based on standard quantity applicable to the days of service among specified period of service, which allows for the determination of acquired quantity at the end of the operation period.

(In millions of won)

34. Share-based payments (continued)

(c) Stock compensation costs calculated for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Compensation costs recorded for the year	₩	11,209	10,748

(d) Accrued expenses of the stock compensation costs and residual compensation costs as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Accrued expenses	₩	36,446	30,773

(In millions of won)

35. Net other operating expenses

Net other operating expenses for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017 (*1)
Other operating income			
Gain on sale of assets:			
Loans at amortized cost	₩	26,872	48,759
Written-off loans		13,119	116
		39,991	48,875
Others:			
Gain on hedge activity from hedged items		112,579	249,223
Gain on hedge activity from hedging instruments		166,934	83,288
Reversal of allowance for acceptances and guarantee		2,833	-
Reversal of other allowance		-	25,439
Others		32,656	23,197
		315,002	381,147
		354,993	430,022
Other operating expense			
Loss on sale of assets:			
Loans at amortized cost		(13,991)	(8,365)
Others:			
Loss on hedge activity from hedged items		(189,152)	(56,133)
Loss on hedge activity from hedging instruments		(91,178)	(284,124)
Provision for allowance for acceptances and guarantee		-	(2,084)
Provision for other allowance		(9,086)	-
Contribution to fund		(275,336)	(244,431)
Deposit insurance fee		(305,860)	(291,750)
Others		(155,611)	(145,924)
		(1,040,214)	(1,032,811)
Net other operating expenses	₩	(685,221)	(602,789)

(*1) As the accounting treatment for the acquisition of ANZ retail business by Shinhan Vietnam was finalized, the amount was adjusted retrospectively.

(In millions of won)

36. Net non-operating income

Net non-operating income for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Non-operating income			
Gain on sale of assets:			
Property and equipment	₩	11,987	4,430
Intangible assets		50	514
Investment properties		4,707	7
Non-current assets held for sale		80	22,920
Assets not used for business purpose		-	126
		16,824	27,997
Investments in associates:			
Gain from disposition		12,991	7,983
Others:			
Rental income on investment property		27,559	25,169
Others		26,834	47,743
		54,393	72,912
		84,208	108,892
Non-operating expenses			
Loss on sale of assets:			
Property and equipment		(1,687)	(1,030)
Intangible assets		(21)	(790)
Investment properties		(1,623)	(1,325)
Non-current assets held for sale		(1,403)	(349)
Assets not used for business purpose		-	(11)
		(4,734)	(3,505)
Investments in associates:			
Impairment loss		-	(144)
Loss on disposal		(393)	(79)
		(393)	(223)
Others:			
Investment properties depreciation		(10,377)	(10,521)
Donations		(59,902)	(121,577)
Others		(26,107)	(20,988)
		(96,386)	(153,086)
		(101,513)	(156,814)
Net non-operating expenses	₩	(17,305)	(47,922)

(In millions of won)

37. Income tax expense

(a) The components of income tax expense of the Group for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017 (*1)
Current income tax expense	₩	588,655	394,651
Deferred taxes arising from changes in temporary differences		293,870	56,847
Deferred taxes arising from utilization of expired unused tax losses		6,947	(15,818)
Tax adjustment charged or credited directly to equity		(22,430)	11,104
Income tax expense	₩	867,042	446,784

(*1) As the accounting treatment for the acquisition of ANZ retail business by Shinhan Vietnam was finalized, the amount was adjusted retrospectively.

(b) The income tax expense calculated by applying statutory tax rates to the Group's taxable income differs from the actual tax expense in the consolidated statements of income for the years ended December 31, 2018 and 2017 for the following reasons:

		2018	2017 (*1)
Profit before income tax	₩	3,146,404	2,159,098
Statutory tax rate		27.50%	24.20%
Income tax expense at statutory tax rates		854,898	522,502
Adjustments:			
Non-taxable income		(30,738)	(8,143)
Non-deductible expense		9,620	10,425
Decrease resulting from consolidated corporate tax system		(34,176)	(25,756)
Income tax paid (refund)		39,986	(27,235)
Impact of tax rate change		-	(46,848)
Others		27,452	21,839
Income tax expense	₩	867,042	446,784
Effective tax rate (*1)		27.56%	20.69%

(*1) As the accounting treatment for the acquisition of ANZ retail business by Shinhan Vietnam was finalized, the amount was adjusted retrospectively.

(In millions of won)

37. Income tax expense (continued)

(c) Changes in temporary differences and deferred tax assets (liabilities) for the years ended December 31, 2018 and 2017 were as follows:

		2018				
		Beginning Balance (*1)	Decreases	Increases	Ending balance	Deferred tax assets (liabilities) (*2)
Accrued income	₩	(479,275)	(479,275)	(644,318)	(644,318)	(177,187)
Accounts receivable		(60,062)	(60,062)	(88,065)	(88,065)	(24,218)
Securities at FVTPL		(49,926)	(106,847)	36,909	93,830	25,803
Securities at FVOCI		829,525	401,295	(149,913)	278,317	76,537
Investments in associates and subsidiaries(*2)		(400,935)	(400,935)	(612,345)	(612,345)	(168,395)
Deferred loan origination costs and fees		(427,937)	(427,937)	(497,515)	(497,515)	(136,817)
Revaluation and depreciation on property and equipment		(449,332)	(4,043)	5,691	(439,598)	(120,469)
Derivative liabilities		(132,214)	(148,734)	(195,727)	(179,207)	(49,282)
Deposits		101,468	15,498	15,981	101,951	28,036
Accrued expenses		426,001	426,001	283,697	283,697	78,017
Defined benefit obligations		1,142,677	105,667	212,447	1,249,457	343,601
Plan assets		(1,180,248)	(88,188)	(175,872)	(1,267,932)	(348,681)
Other provisions		176,675	178,027	179,175	177,823	48,902
Allowance for guarantees and acceptance		63,357	63,357	105,542	105,542	29,024
Allowance for advanced depreciation		(179,393)	(2,256)	-	(177,137)	(48,713)
Allowance for expensing depreciation		(1,923)	(232)	-	(1,691)	(465)
Deemed dividends		19,171	19,171	-	-	-
Net change in fair value of securities at FVOCI		(7,233)	(7,233)	21,341	21,341	5,869
Donation payables		39,429	39,429	78,750	78,750	21,656
Allowance and bad debt		463,135	463,135	162,884	162,884	45,903
Compensation expenses associated with stock option		437	359	100	178	49
Fictitious dividends		4,060	-	-	4,060	1,116
Others		195,341	318,316	271,361	148,386	35,161
		107,264	318,979	(989,877)	(1,201,592)	(334,553)
Expired unused tax losses						
Appropriation by extinctive prescription of deposit		1,281,039	25,262	-	1,255,777	345,339
Temporary differences not qualified for deferred tax assets or liabilities:						
Investments in associates and Subsidiaries (*3)		(470,668)	-	(214,788)	(685,456)	(188,500)
	₩	1, 858,971	344,241	(775,089)	739,641	199,286

(*1) The balances ware restated in accordance with K-IFRS No.1109 and K-IFRS No.1115.
(*2) Deferred tax assets of overseas subsidiaries have decreased by ₩29 million due to foreign currency exchange rate changes.
(*3) The effect of income taxes by the valuation of equity method was reasonably estimated based on the both plausibility and the applicable amount of deferred income tax belonging to each associate investee.

(In millions of won)

37. Income tax expense (continued)

(c) Changes in temporary differences and deferred tax assets (liabilities) for the years ended December 31, 2018 and 2017 were as follows: (continued)

		2017				
		Beginning balance	Decreases	Increases	Ending balance	Deferred tax assets (liabilities) (*1)(*3)
Accrued income	₩	(343,790)	(343,790)	(479,275)	(479,275)	(131,801)
Accounts receivable		(36,089)	(36,089)	(60,062)	(60,062)	(16,517)
Trading assets		(56,431)	(59,629)	(53,124)	(49,926)	(13,730)
Available-for-sale financial assets		789,164	463,300	503,661	829,525	228,119
Investments in associates (*2)		(217,184)	(217,184)	(400,935)	(400,935)	(110,257)
Deferred loan origination costs and fees		(378,933)	(378,933)	(427,937)	(427,937)	(117,683)
Revaluation and depreciation on property and equipment		(458,788)	(5,717)	3,739	(449,332)	(123,146)
Derivative liabilities		(141,875)	(152,868)	(143,207)	(132,214)	(36,359)
Deposits		75,051	17,938	44,355	101,468	27,904
Accrued expenses		299,584	300,935	427,352	426,001	117,150
Defined benefit obligations		1,133,301	54,254	63,630	1,142,677	314,236
Plan assets		(988,597)	(54,253)	(245,904)	(1,180,248)	(324,568)
Other provisions		228,432	228,432	178,180	178,180	49,099
Allowance for guarantees and acceptance		78,499	78,499	79,791	79,791	21,942
Allowance for advanced depreciation		(179,438)	(45)	-	(179,393)	(49,333)
Allowance for expensing depreciation		(2,155)	(232)	-	(1,923)	(529)
Deemed dividends		5,513	-	13,658	19,171	5,272
Net change in fair value of available-for-sale financial assets		(190,018)	(190,018)	(58,996)	(58,996)	(12,156)
Donation payables		35,717	35,717	39,429	39,429	10,843
Allowance and bad debt		318,993	318,993	70,748	70,748	23,533
Compensation expenses associated with stock option		2,344	2,266	359	437	120
Fictitious dividends		4,026	19	53	4,060	1,117
Others		154,613	(40,242)	486	195,341	50,371
		131,939	21,353	(443,999)	(333,413)	(86,373)
Expired unused tax losses						
Appropriation by extinctive prescription of deposit		1,390,362	109,323	-	1,281,039	352,286
Temporary differences not qualified for deferred tax assets or liabilities:						
Investments in associates (*2)		(280,957)	-	(189,711)	(470,668)	(129,436)
	₩	1,803,258	130,676	(254,288)	1,418,294	395,349

(*1) Deferred tax assets of overseas subsidiaries have increased by ₩1,653 million due to foreign currency exchange rate changes.
(*2) The effect of income taxes by the valuation of equity method was reasonably estimated based on the both plausibility and the applicable amount of deferred income tax belonging to each associate investee.
(*3) As the accounting treatment for the acquisition of ANZ retail business by Shinhan Vietnam was finalized, the amount was adjusted retrospectively.

(In millions of won)

37. Income tax expense (continued)

(d) Changes in tax effects that were directly charged or credited to equity for the years ended December 31, 2018 and 2017 were as follows:

		December 31, 2018		December 31, 2017 (*1)		
		Amount before tax	Tax effects	Amount before tax	Tax effects	Changes in tax effects
Net change in fair value of securities at FVOCI	₩	(21,341)	223	(185,414)	60,874	(60,651)
Share of other comprehensive income (loss) of associates		4,923	(64)	6,749	(163)	99
Foreign currency translation differences for foreign operations		(296,622)	(16,381)	(311,258)	(25,905)	9,524
Remeasurements of defined benefit plans		(382,774)	105,339	(285,698)	78,662	26,677
Other (stock option)		6,690	(1,836)	2,899	(3,757)	1,921
	₩	(689,124)	87,281	(772,722)	109,711	(22,430)

(*1) The balances ware restated in accordance with K-IFRS No.1109 and K-IFRS No.1115.

		December 31, 2017		December 31, 2016		
		Amount before tax	Tax effects	Amount before tax	Tax effects	Changes in tax effects
Net change in fair value of available-for-sale financial assets	₩	58,996	(12,155)	190,018	(50,194)	38,039
Share of other comprehensive income (loss) of associates		6,749	(163)	16,392	191	(354)
Foreign currency translation differences for foreign operations		(311,258)	(25,905)	(140,918)	(11,018)	(14,887)
Remeasurements of defined benefit plans		(285,698)	78,662	(370,692)	89,776	(11,114)
Other (stock option)		1,079	(297)	(1,170)	283	(580)
	₩	(530,132)	40,142	(306,370)	29,038	11,104

(e) The current tax assets and liabilities as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Current tax assets:			
Prepaid income taxes	₩	43,026	24,674
Current tax liabilities:			
Payable due to consolidated tax system	₩	265,789	179,364
Income taxes payables		53,639	31,580
	₩	319,428	210,944

(In millions of won, except for earnings per share)

37. Income tax expense (continued)

(f) The deferred tax assets (liabilities) and current tax assets (liabilities) presented on a gross basis prior to any offsetting as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Deferred tax assets	₩	1,713,266	2,138,000
Deferred tax liabilities		1,513,980	1,742,650
Current tax assets		236,015	240,818
Current tax liabilities		512,418	427,357

38. Earnings per share

(a) Earnings per share for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Profit for the year	₩	2,279,049	1,712,073
Less: dividends on hybrid bonds		(25,228)	(29,857)
Profit available for common stock	₩	2,253,821	1,682,216
Weighted average number of common shares outstanding		1,585,615,506 shares	1,585,615,506 shares
Basic and diluted earnings per share in won	₩	1,421	1,061

Considering that the Bank had no dilutive potential common shares and that stock options were not included in the calculation of diluted earnings per share because they were anti-dilutive for the reporting periods presented, diluted earnings per share equal to basic earnings per share for the years ended December 31, 2018 and 2017.

(b) Weighted average number of common shares outstanding as of December 31, 2018 and 2017 were as follows:

	2018	2017
Number of common shares outstanding	1,585,615,506 shares	1,585,615,506 shares
Weight	365/365	365/365
Weighted average number of common shares outstanding	1,585,615,506 shares	1,585,615,506 shares

(In millions of won)

39. Commitments and contingencies

(a) Guarantees, acceptances and credit commitments as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Guarantees:			
Guarantee outstanding	₩	9,415,888	7,590,785
Contingent guarantees		3,984,667	3,254,846
	₩	13,400,555	10,845,631
Commitments to extend credit:			
Loan commitments in Korean won	₩	69,126,234	53,338,916
Loan commitments in foreign currencies		19,967,126	18,992,870
ABS and ABCP purchase commitments		2,083,522	1,950,543
Others		1,907,432	1,456,976
	₩	93,084,314	75,739,305
Endorsed bills:			
Secured endorsed bills	₩	37,667	85,456
Unsecured endorsed bills		7,758,242	7,810,788
	₩	7,795,909	7,896,244
Loans sold with repurchase agreement	₩	2,099	2,099

(b) Provision for acceptances and guarantees

Allowance for acceptances and guarantees, as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Guarantees outstanding	₩	9,415,888	7,590,785
Contingent guarantees		3,984,667	3,254,846
ABS and ABCP purchase commitments		2,083,522	1,950,543
Secured endorsed bills		37,667	85,456
	₩	15,521,744	12,881,630
Allowance for acceptances and guarantees	₩	105,543	79,791
Ratio (%)		0.68	0.62

(In millions of won)

39. Commitments and contingencies (continued)

(c) Legal contingencies

Pending litigations in which the Group was involved as a defendant as of December 31, 2018 were as follows:

Case	Number of claim		Claim amount	Description	Status
Damage claim	1	₩	6,893	According to the asset custody contract, the plaintiff is liable for damages caused by a fire in the property of the real estate investment company in which the Bank is holding assets.	In 2015 and 2017, the plaintiffs prevailed, but the first and second decisions were different and in progress of third order.
Deposit return	1		4,606	The plaintiff alleges that the plaintiff has canceled the money received in his account without his consent, and requested the plaintiff to pay the deposit equivalent to the amount.	Since 2017, the Bank won the first and second trial and the third trial was ongoing as of December 31, 2018.
Indemnification cost	1		4,112	According to the asset custody contract, the plaintiffs filed a lawsuit against the Bank, claiming for a fire damage occurred on a property of the real estate investment company for which the Bank provides the custodian service.	In 2017, the Bank has lost on the first order and in progress for second order.
Others	107		51,111	It includes various cases, such as compensation for loss claim.	
	110	₩	66,722		

As of December 31, 2018, the Group recorded a provision of ₩5,773 million for litigation for certain of the above lawsuits. Additional losses may be incurred from these legal actions besides the current provision established by the Group, but the amount of loss is not expected to have a material adverse effect on the Group's consolidated financial statements.

(In millions of won)

39. Commitments and contingencies (continued)

(d) Maturity structure of minimum lease payments

The future minimum lease payments to be paid under non-cancellable operating leases as of December 31, 2018 and 2017 were as follows:

		December 31, 2018			
		Within 1 year	1~5 years	Over 5 years	Total
Minimum lease payments	₩	175,281	325,479	17,756	518,516

		December 31, 2017			
		Within 1 year	1~5 years	Over 5 years	Total
Minimum lease payments	₩	239,105	320,861	32,739	592,705

(In millions of won)

40. Statements of cash flows

(a) Cash and cash equivalents reported in the accompanying consolidated statements of cash flows as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Cash	₩	2,568,913	1,749,897
Reserve deposits		2,094,612	8,503,968
Other deposits		8,486,752	8,408,457
Cash and due from banks		13,150,277	18,662,322
Less: Restricted due from banks		(3,888,144)	(11,103,030)
Less: Due with original maturities of more than three months		(2,557,180)	(2,228,189)
	₩	6,704,953	5,331,103

(b) Significant non-cash activities for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Dividend payable of hybrid bonds	₩	2,597	1,367
Debt-equity swap		28,759	32,530
Accounts payable for purchase of property and equipment		897	-
Accounts payable for purchase of intangible assets		1,047	5,061

(c) Changes in liabilities resulting from financing activities for the years ended December 31, 2018 and 2017 were as follows:

		December 31, 2018		
		Borrowings	Debt securities issued	Total
Beginning balance	₩	14,617,562	25,460,427	40,077,989
Changes in cash flows		1,094,960	6,447,699	7,542,659
Amortization		(1,722)	(76,675)	(78,397)
Net foreign currencies transaction gain		(459,236)	30,211	(429,025)
Changes in fair value of hedged items		903,257	37,604	940,861
Ending balance	₩	16,154,821	31,899,266	48,054,087

		December 31, 2017		
		Borrowings	Debt securities issued	Total
Beginning balance	₩	14,314,329	21,578,430	35,892,759
Changes in cash flows		958,927	4,470,201	5,429,128
Amortization		802	3,196	3,998
Net foreign currencies transaction gain		(656,496)	(448,744)	(1,105,240)
Changes in fair value of hedged items		-	(142,656)	(142,656)
Ending balance	₩	14,617,562	25,460,427	40,077,989

(In millions of won)

41. Related party transactions

(a) Significant balances with the related parties as of December 31, 2018 and 2017 were as follows:

Related party	Account		December 31, 2018	December 31, 2017
The parent company				
Shinhan Financial Group	Other assets	₩	-	934
	Deposits		24	3
	Other liabilities		309,355	222,867
Entities under common control				
Shinhan Card Co., Ltd.	Derivative assets		5,100	785
	Other assets		1,338	2,248
	Deposits		23,522	7,263
	Derivative liabilities		269	2,539
	Provisions		180	47
	Other liabilities		22,702	23,106
Shinhan Investment Corp.	Cash and due from banks		6,281	3,461
	Derivative assets		13,095	3,954
	Loans		22,914	14,984
	Allowance for loan loss		(19)	(4)
	Other assets		19,972	18,240
	Deposits		202,561	272,064
	Derivative liabilities		1,981	39,302
	Provisions		67	34
	Other liabilities		40,338	39,010
Shinhan Life Insurance	Derivative assets		17,302	1,558
	Other assets		3	11
	Deposits		14,335	6,379
	Derivative liabilities		7,771	44,928
	Provisions		16	4
	Other liabilities		14,674	15,184
Shinhan Capital Co., Ltd.	Deposits		1,504	754
	Borrowings		12,000	10,000
	Provisions		14	14
	Other liabilities		13,611	12,799
Jeju Bank	Loans		1,621	2,658
	Allowance for loan loss		(2)	(1)
	Other assets		1	1
	Deposits		11,045	22,376
	Other liabilities		2,446	2,475
Shinhan Credit Information Co., Ltd.	Deposits		3,793	6,059
	Other liabilities		1,599	1,719
Shinhan Alternative Investment Management, Inc.	Deposits		5,405	168
	Other liabilities		23	-

(In millions of won)

41. Related party transactions (continued)

(a) Significant balances with the related parties as of December 31, 2018 and 2017 were as follows: (continued)

Related party	Account		December 31, 2018	December 31, 2017
Entities under common control (continued)				
Shinhan BNP Paribas AMC	Deposits	₩	121,976	117,149
	Other liabilities		1,673	1,512
Shinhan DS	Deposits		815	11,135
	Other liabilities		6,567	6,544
Shinhan Savings Bank	Other liabilities		8,987	8,987
Shinhan Aitas	Deposits		14,604	9,381
	Other liabilities		60	41
Shinhan REITs Management	Deposits		79	71
Shinhan BNPP Global Multi Asset Security Trust	Other assets		-	1
Investments in associates and entities under common control				
BNP Paribas Cardif	Other assets		-	9,760
Life Insurance Co., Ltd.	Deposits		444	446
	Provisions		-	2
BNP Paribas Cardif General Insurance	Deposits		157	221
Dream High Fund III	Deposits		4	3
Midas Dong-A Snowball Venture Fund	Deposits		159	220
IBKS-Shinhan Creative Economy New Technology Fund	Deposits		-	78
JAEYOUNG SOLUTEC Co., Ltd.	Loans		-	14,847
(*1)	Allowance for loan loss		-	(123)
	Deposits		-	2,659
	Provisions		-	4
Partners 4th Growth Investment Fund	Deposits		1,855	2,076
Credian Health Care Private Equity Fund II	Deposits		45	26
Snowball Venture Fund II	Deposits		354	239
IBKS-Shinhan Creative Economy New Technology Fund II	Deposits		672	76
YIUM The 3rd Private Investment Joint Stock Company	Deposits		49	65
Branbuil Co., Ltd	Deposits		-	55
KTB Newlake Global	Loans		151	-
Healthcare PEF	Allowance for loan loss		(1)	-
	Deposits		-	465
	Provisions		-	13
Taihan Industrial System Co., Ltd	Deposits		85	100
ICSF (The Korea's Information Center for Savings & Finance)	Deposits		4	4

(In millions of won)

41. Related party transactions (continued)

(a) Significant balances with the related parties as of December 31, 2018 and 2017 were as follows: (continued)

Related party	Account	December 31, 2018	December 31, 2017
Investments in associates and entities under common control (continued)			
Key management personnel			
	Loans	2,783	2,828
	Allowance for loan loss	(1)	(3)
	Provisions	1	1

(*1) These investees were sold and excluded from associates during the year ended December 31, 2018.

(b) Significant transactions with the related parties for the years ended December 31, 2018 and 2017 were as follows:

Related Party	Account		2018	2017
The parent company				
Shinhan Financial Group	Other operating income	₩	1,392	2,228
	Interest expense		(268)	(228)
	Fees and commission expense		(31,608)	(29,779)
Entities under common control				
Shinhan Card Co., Ltd.	Interest income		3,302	1,868
	Fees and commission income		198,589	187,385
	Gain related to derivatives		8,975	2,694
	Other operating income		1,815	2,092
	Interest expense		(256)	(528)
	Fees and commission expense		(180)	(177)
	Loss related to derivatives		(371)	(5,111)
	Other operating expense		(3,561)	(3,064)
Shinhan Investment Corp.	Interest income		950	466
	Fees and commission income		7,362	5,167
	Gain related to derivatives		45,592	10,037
	Other operating income		4,484	4,637
	Interest expense		(2,247)	(1,499)
	Loss related to derivatives		(14,150)	(98,769)
	Provision for Allowance		(15)	(3)
	Other operating expense		(286)	(785)
Shinhan Life Insurance	Interest income		49	47
	Fees and commission income		11,286	7,513
	Gain related to derivatives		51,311	7,117
	Other operating income		695	1,470
	Interest expense		(278)	(264)
	Loss related to derivatives		(8,272)	(109,882)
	Other operating expense		(641)	(843)

(In millions of won)

41. Related party transactions (continued)

(b) Significant transactions with the related parties for the years ended December 31, 2018 and 2017 were as follows: (continued)

Related Party	Account		2018	2017
Entities under common control (continued)				
Shinhan Capital Co., Ltd.	Other operating income	₩	972	314
	Interest expense		(852)	(979)
	Fees and commission expense		-	(10)
	Other operating expense		-	(4)
Jeju Bank	Interest income		25	3
	Other operating income		52	44
	Interest expense		(79)	(45)
	Reversal of allowance		(1)	-
Shinhan Credit Information Co., Ltd.	Fees and commission income		3	3
	Other operating income		83	76
	Interest expense		(84)	(94)
	Fees and commission expense		(5,095)	(4,645)
Shinhan Alternative Investment Management, Inc.	Interest expense		(37)	-
Shinhan BNP Paribas AMC	Fees and commission income		44	-
	Other operating income		9	52
	Interest expense		(2,157)	(1,187)
	Reversal of allowance		-	16
	Fees and commission expense		(2,158)	(2,250)
Shinhan DS	Other operating income		175	134
	Interest expense		(146)	(168)
	Other operating expense		(41,096)	(34,629)
Shinhan Savings Bank	Fees and commission income		869	796
	Other operating income		205	175
	Interest expense		(152)	(120)
Shinhan Aitas	Fees and commission income		31	31
	Other operating income		6	5
	Interest expense		(70)	(71)
Shinhan BNPP Global Multi Asset Security Trust	Fees and commission income		-	5
Shinhan REITs Management	Interest expense		(132)	-

(In millions of won)

41. Related party transactions (continued)

(b) Significant transactions with the related parties for the years ended December 31, 2018 and 2017 were as follows: (continued)

Related Party	Account		2018	2017
Investments in associates and entities under common control (continued)				
BNP Paribas Cardif Life Insurance Co., Ltd.	Fees and commission income	₩	2,418	3,246
	Other operating expense		-	(1)
BNP Paribas Cardif General Insurance	Fees and commission income		5	2
IBKS-Shinhan Creative Economy New Technology Fund	Interest expense		-	(2)
Midas Dong-A Snowball Venture Fund	Interest expense		(2)	(3)
JAEYOUNG SOLUTEC CO.,LTD.(*1)	Interest income		347	654
	Fees and commission income		1	1
	Other operating income		3	3
	provision for allowance		(2)	(55)
	Interest expense		(1)	(4)
Partners 4th Growth Investment Fund	Interest expense		(19)	(16)
Shinhan-Albatross Technology Investment Fund	Interest expense		-	(21)
KTB Newlake Global Healthcare PEF	Interest income		2	10
Snowball Venture Fund II	Interest expense		(2)	-
Branbuil CO.,LTD.	Fees and commission income		-	2
Taihan Industrial System Co., Ltd.	Fees and commission income		1	2
Hyungje Art Printing	Interest income		13	-
	Fees and commission income		1	-
Key management personnel				
	Interest income		94	94

(*1) These investees were sold and excluded from associates during the year ended December 31, 2018.

(In millions of won)

41. Related party transactions (continued)

(c) Details of transactions with key management for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Short and long term employee benefits	₩	14,175	8,916
Post-employment benefits		305	298
Share-based payment transactions		2,393	4,655
	₩	16,873	13,869

(d) The guarantees provided between the related parties as of December 31, 2018 and 2017 were as follows:

		Amount of guarantees		
Guaranteed parties		December 31, 2018	December 31, 2017	Account
Shinhan Investment Corp.	₩	214,955	218,166	Unused credit
Shinhan Card Co., Ltd.		500,000	500,000	Unused credit
Shinhan Life Insurance		50,000	50,000	Unused credit
Shinhan Capital Co., Ltd.		70,000	70,000	Unused credit
Shinhan BNP Paribas AMC		228,216	53,484	Security underwriting commitment
BNP Paribas Cardif Life Insurance Co., Ltd.		10,000	10,000	Unused credit
Shinhan Private Equity, Inc.		3,600	-	Security underwriting commitment
Neoplux Technology Valuation Investment Fund		-	6,000	Security underwriting commitment
JAEYOUNG SOLUTEC CO., LTD. (*1)		-	109	Unused credit
		-	429	Import letter of credit
KTB Newlake Global Healthcare PEF		849	700	Unused credit
	₩	1,077,620	908,888	

(*1) This investee was sold and excluded from associates during the year ended December 31, 2018.

(e) Details of collaterals provided to the related parties as of December 31, 2018 and 2017 were as follows:

				December 31, 2018		December 31, 2017	
	Related party	Pledged assets		Carrying amounts	Amounts collateralized	Carrying amounts	Amounts collateralized
Entities under common control	Shinhan Life Insurance	Securities		10,230	10,230	10,271	10,271
			₩	10,230	10,230	10,271	10,271

(In millions of won)

41. Related party transactions (continued)

(f) Details of collaterals provided by the related parties as of December 31, 2018 and 2017 were as follows:

	Related party	Pledged assets		December 31, 2018	December 31, 2017
Entities under common control	Shinhan Investment Corp.	Deposits	₩	135,700	135,700
		Real estate		91,974	91,974
	Jeju Bank	Government bonds		20,000	20,000
	Shinhan Life Insurance	Government bonds		6,000	7,170
	Shinhan Credit Information Co., Ltd.	Deposits		180	180
Investments in associates	BNP Paribas Cardif Life Insurance Co., Ltd.	Government bonds		12,000	11,666
	JAEYOUNG SOLUTEC. CO.,LTD. (*1)	Real estate		-	20,814
		Korea Trade Insurance corporation guarantee		-	7,037
			₩	265,854	294,541

(*1) This investee was sold and excluded from associates during the year ended December 31, 2018.

(g) Details of major lease and collection of related parties as of December 31, 2018 are as follows.

	Related party		Beginning(*1)	Rental	Recovery	Ending (*1)
Entities under common control	Jeju Bank	₩	2,658	3,223	(4,260)	1,621
	Shinhan Financial Investment		14,984	39,307	(31,377)	22,914
Investments in associates and entities under common control	KTB Newlake Global Healthcare PEF		-	151	-	151
			17,642	42,681	(35,637)	24,686

(*1) The amount is before deducting allowance for bad debts.

(h) Details of significant redemption of borrowings of related parties as of December 31, 2018 are as follows:

	Related party		Beginning balance	Rental	Recovery	Ending balance
Entities under common control	Shinhan Capital Co., Ltd.	₩	10,000	3,000	(1,000)	12,000

(In millions of won)

42. Investments in subsidiaries

(a) Condensed statements of financial positions for the Bank and its subsidiaries as of December 31, 2018 and 2017 were as follows:

		2018			2017		
		Total assets	Total liabilities	Total equity	Total assets	Total liabilities	Total equity
Shinhan Bank	₩	323,875,533	300,304,150	23,571,383	302,936,552	280,748,048	22,188,504
Shinhan America		1,584,978	1,358,153	226,825	1,431,268	1,263,477	167,791
Shinhan Canada		607,970	541,887	66,083	586,627	520,390	66,237
Shinhan Europe		604,022	522,862	81,160	603,810	522,745	81,065
Shinhan China		5,448,655	5,031,704	416,951	5,192,164	4,822,109	370,055
Shinhan Asia (*2)		115,360	-	115,360	546,377	339,948	206,429
Shinhan Kazakhstan		122,927	83,431	39,496	97,596	55,896	41,700
Shinhan Cambodia		282,807	167,372	115,435	202,162	129,095	73,067
Shinhan Japan		7,704,586	7,126,117	578,469	6,163,835	5,728,776	435,059
Shinhan Vietnam (*1)(*3)		4,101,845	3,489,835	612,010	3,676,216	3,140,045	535,171
Shinhan Mexico		118,821	35,253	83,568	80,425	485	79,940
Shinhan Indonesia (*1)		971,954	613,185	358,769	683,316	324,426	358,890
Structured entities		8,111,107	8,108,193	2,914	7,577,627	7,567,521	10,106

(*1) Fair value adjustments at the time of business combination were applied.
(*2) As of November 27, 2018, Shinhan Asia has transferred its assets and liabilities amounting to ₩727,206 million and ₩727,194, respectively, to the Shinhan Bank Hong Kong branch. This corresponds to a business transfer between entities under common control, and the Group accounts for this kind of business transfer transactions based on the carrying amount. As of December 31, 2018, the assets of Shinhan Asia were ₩115,360 million and liquidation procedures are in progress.
(*3) As the accounting treatment for the acquisition of ANZ retail business by Shinhan Vietnam was completed, the amount was adjusted retrospectively.

(In millions of won)

42. Investments in subsidiaries (continued)

(b) Condensed statements of comprehensive income for the Bank and its subsidiaries for the years ended December 31, 2018 and 2017 were as follows:

		2018			2017		
		Operating income	Profit (loss) for the year	Total comprehensive income (loss)	Operating income	Profit (loss) for the year	Total comprehensive income (loss)
Shinhan Bank	₩	18,611,228	2,116,606	2,179,652	20,380,963	1,607,761	1,536,857
Shinhan America		69,149	(2,547)	4,046	64,897	9,472	(11,374)
Shinhan Canada		23,027	2,760	174	18,055	3,497	324
Shinhan Europe		14,243	14	8	13,332	2,227	3,104
Shinhan China		284,885	31,764	47,129	284,447	21,875	(10,618)
Shinhan Asia		39,666	20,319	30,886	25,643	13,813	(13,104)
Shinhan Kazakhstan		10,815	1,929	(2,356)	8,620	2,030	(2,550)
Shinhan Cambodia		17,492	8,102	12,777	11,758	3,593	(3,399)
Shinhan Japan		187,806	64,929	95,418	176,392	68,872	30,889
Shinhan Vietnam (*1)(*2)		292,539	94,987	79,317	194,137	46,477	13,998
Shinhan Mexico		6,736	(116)	3,627	2,026	(2,986)	(5,003)
Shinhan Indonesia (*1)		64,006	10,640	(120)	42,112	8,590	(28,801)
Structured entities		241,466	(12,499)	(22,325)	208,978	23,540	27,829

(*1) Fair value adjustment at the time of business combination was applied.
(*2) As the accounting treatment for the acquisition of ANZ retail business by Shinhan Vietnam was completed, the amount was adjusted retrospectively.

43. Interests in unconsolidated structured entities

(a) The nature and extent of interests in unconsolidated structured entities

The Group involved in assets-backed securitization, structured financing, beneficiary certificates and other structured entities and characteristics of these structured entities are as follows:

	Description
Assets-backed securitization	Securitization vehicles are established to buy assets from originators and issue asset-backed securities in order to facilitate the originators' funding activities and enhance their financial soundness. The Group is involved in the securitization vehicles by purchasing (or committing to purchase) the asset-backed securities issued and/or providing other forms of credit enhancement. The Group does not consolidate a securitization vehicle if (i) the Group is unable to make or approve decisions as to the modification of the terms and conditions of the securities issued by such vehicle or disposal of such vehicles' assets, (ii) (even if the Group is able to do so) if the Group does not have the exclusive or primary power to do so, or (iii) if the Group does not have exposure, or right, to a significant amount of variable returns from such entity due to the purchase (or commitment to purchase) of asset-backed securities issued or subordinated obligations or by providing other forms of credit support.
Structured financing	Structured entities for project financing are established to raise funds and invest in a specific project such as M&A (Mergers and Acquisitions), BTL (Build-Transfer-Lease), shipping finance, etc. The Group is involved in the structured entities by originating loans, investing in equity, or providing credit enhancement
Investment fund	Investment fund is a type of financial instrument where investment funds raise funds from the general public to invest in a group of assets such as stocks or bonds and distribute their income and capital gains to their investors. The Group is involved in investment fund by investing in various investment funds.

(In millions of won)

43. Interests in unconsolidated structured entities (continued)

(a) The nature and extent of interests in unconsolidated structured entities (continued)

i) The size of unconsolidated structured entities as of December 31, 2018 and 2017 were as follows:

		December 31, 2018			
		Assets-backed securitization	Structured financing	Investment fund	Total
Total assets	₩	87,030,471	71,518,755	32,031,029	190,580,255

		December 31, 2017			
		Assets-backed securitization	Structured financing	Investment fund	Total
Total assets	₩	84,536,825	44,287,001	40,337,712	169,161,538

ii) Income and expenses from unconsolidated structured entities for the years ended December 31, 2018 and 2017 were as follows:

		2018			
		Assets-backed securitization	Structured financing	Investment fund	Total
Income					
Interest income	₩	147,318	109,081	866	257,265
Fees and commission income		12,660	20,029	-	32,689
Dividend income		-	5,713	32,083	37,796
Other		83	4,868	9,214	14,165
	₩	160,061	139,691	42,163	341,915
Expenses	₩	1	3	793	797

		2017			
		Assets-backed securitization	Structured financing	Investment fund	Total
Income					
Interest income	₩	105,569	79,951	1,912	187,432
Fees and commission income		10,353	14,314	12,449	37,116
Dividend income		-	4,285	24,467	28,752
Other		23	3,382	129	3,534
	₩	115,945	101,932	38,957	256,834
Expenses	₩	24	130,554	11,261	141,839

(In millions of won)

43. Interests in unconsolidated structured entities (continued)

(b) Nature of risk associated with interests in unconsolidated structured entities

i) The carrying amounts of the assets and liabilities recognized relating to its interests in unconsolidated structured entities as of December 31, 2018 and 2017 were as follows:

		December 31, 2018			
		Assets-backed securitization	Structured financing	Investment fund	Total
Assets:					
Loans at amortized cost	₩	191,160	3,655,478	25,151	25,151
Loans at FVTPL		-	-	-	-
Securities at FVTPL		3,720,323	178	2,601,732	2,601,732
Derivative assets		16,445	673	-	-
Securities at FVOCI		1,740,939	90,866	-	-
Securities at amortized cost		2,945,914	-	-	-
Others		-	-	56,001	56,001
	₩	8,614,781	3,747,195	2,682,884	2,682,884
Liabilities:					
Derivative liabilities	₩	306	-	-	306

		December 31, 2017			
		Assets-backed securitization	Structured financing	Investment fund	Total
Assets:					
Loans	₩	172,319	2,793,380	52,600	3,018,299
Trading assets		3,168,191	-	-	3,168,191
Derivative assets		14,218	-	-	14,218
Available-for-sale financial assets		1,352,955	80,618	1,755,477	3,189,050
Held-to-maturity financial assets		2,491,933	-	-	2,491,933
Others		-	-	1,013	1,013
	₩	7,199,616	2,873,998	1,809,090	11,882,704
Liabilities:					
Derivative liabilities	₩	4,448	-	-	4,448

(In millions of won)

43. Interests in unconsolidated structured entities (continued)

(b) Nature of risk associated with interests in unconsolidated structured entities (continued)

ii) Exposure to risk relating to interests in unconsolidated structured entities as of December 31, 2018 and 2017 were as follows:

		December 31, 2018			
		Assets-backed securitization	Structured financing	Investment fund	Total
Assets owned	₩	8,614,780	3,747,194	2,678,131	15,040,105
Purchase commitments		1,282,874	-	-	1,282,874
Providing unused credit		2,328,748	123,948	26,100	2,478,796
Guarantees		-	142,032	-	142,032
	₩	12,226,402	4,013,174	2,704,231	18,943,807

		December 31, 2017			
		Assets-backed securitization	Structured financing	Investment fund	Total
Assets owned	₩	7,199,616	2,873,998	1,809,090	11,882,704
Purchase commitments		1,331,035	-	35,684	1,366,719
Providing unused credit		529,566	81,547	31,987	643,100
	₩	9,060,217	2,955,545	1,876,761	13,892,523

(In millions of won)

44. Information of trust business

(a) Total assets with trust business as of December 31, 2018 and 2017 and operating revenue for the years ended December 31, 2018 and 2017 were as follows:

		Total assets		Operating revenue	
		December 31, 2018	December 31, 2017	2018	2017
Consolidated	₩	4,521,280	4,471,457	128,577	85,672
Unconsolidated		71,639,988	46,014,514	996,465	929,899
	₩	76,161,268	50,485,971	1,125,042	1,042,427

(b) Significant balances with trust business as of December 31, 2018 and 2017 were as follows:

		December 31, 2018	December 31, 2017
Borrowings from trust accounts	₩	2,994,798	4,052,608
Accrued revenues from asset management fee from trust accounts		34,286	28,795
Accrued interest expenses		1,325	824

(c) Significant transactions with trust business for the years ended December 31, 2018 and 2017 were as follows:

		2018	2017
Asset management fee from trust accounts	₩	192,422	166,189
Termination fee		6,840	3,415
Interest on borrowings from trust accounts		45,154	37,869

(In millions of won)

45. Business combination

On December 17, 2017, the Group acquired the retail business of ANZ Vietnam to increase business competitiveness and achieve a synergy effect in the banking business in Vietnam.

Goodwill amounted to ₩28,199 million arising from the acquisition is related to the synergy effect of business combination between the Group and the acquired retail business, as well as the acquired customer base.

As of December 31, 2017, management was in the process of identification of intangible assets and valuation of identifiable assets and liabilities for allocation of consideration, and the financial impact from the business combination was recognized based on the tentative analysis. During the year ended December 31, 2018, the accounting for the business combination was completed, and the tentative balances of identifiable assets and liabilities recognized at the acquisition date were retrospectively adjusted.

(a) Details of retrospective adjustments for transfer price, acquired assets, liabilities and goodwill related to the acquisition of ANZ business were as follows:

		Before adjustments	After adjustments	Adjustment amounts
Transfer price :				
Cash	₩	(75,480)	(75,480)	-
Amounts recognized as identifiable assets and liabilities :				
Cash and due from banks		8,151	8,151	-
Loans (*1)		301,766	302,940	1,174
Other current assets (*1)		9,269	9,269	-
Property and equipment		538	538	-
Intangible assets (*2)		-	15,256	15,256
Deposits		(436,285)	(436,285)	-
Other current liabilities		(1,022)	(1,022)	-
Provisions (*3)		-	(2,526)	(2,526)
		(117,583)	(103,679)	13,904
Goodwill		42,103	28,199	(13,904)
Direct costs related to acquisition (*4)		5,830	5,830	-

(*1) Fair values of the acquired loans and other receivables amounted to ₩308,084 million. Total amounts of loans and other receivables at the acquisition date were estimated to be ₩313,277 million, out of which ₩5,193 million was not expected to be recoverable.
(*2) The identifiable intangible assets acquired as a result of the business combination consisted of ₩4,454 million of the present value of expected savings of funding costs resulting from the lower interest rates than other funding sources, and the present value of economic benefits that can be generated through credit card customer relationship in the future amounted to ₩10,802 million.
(*3) Provisions were recognized for possible credit losses on unused limits.
(*4) In relation to the business combination, legal fee and due diligence fee amounted to ₩1,336 million and payments of value-added tax to Vietnam tax authorities amounted to ₩4,494 million, which were included in the general and administrative expenses in the consolidated statement of comprehensive income for the year ended December 31, 2017.

(In millions of won)

45. Business combination (continued)

(b) Comparative statement of financial position as at December 31, 2017 was retrospectively restated as follows:

		Before adjustments	After adjustments	Adjustment amounts
Intangible assets	₩	298,227	299,579	1,352
Deferred tax liabilities		11,723	11,994	271
Retained earnings		14,141,464	14,142,545	1,081

46. Transition effects arising from changes in accounting policies

As described in Note 3, the Group has changed its accounting policies upon adoption of K-IFRS No.1109, *Financial Instruments*, and K-IFRS No.1115, *Revenue from Contracts with Customers*. With respect to classification, measurement and impairment of financial instruments, the consolidated financial statements as of and for the year ended December 31, 2017 have not been restated in accordance with the exemption not to restate comparative financial statements.

K-IFRS No.1109 replaced K-IFRS No.1039, *Financial Instruments: Recognition and Measurement*, relating to recognition, classification and measurement of financial assets and financial liabilities, derecognition of financial instruments, impairment of financial assets and hedge accounting. Additionally, K-IFRS No.1109 made amendments to other standards relating to financial instruments such as K-IFRS No.1107, *Financial Instruments: Disclosures*.

K-IFRS No.1115 replaced existing revenue recognition guidance, including K-IFRS No.1018, *'Revenue'*, K-IFRS No.1011, *'Construction Contracts'*, K-IFRS No.2031, *'Revenue-Barter Transactions Involving Advertising Services'*, K-IFRS No.2113, *'Customer Loyalty Programmes'*, K-IFRS No.2115, *'Agreement for the Construction of Real Estate'*, and K-IFRS No.2118, *'Transfers of Assets from Customers.'*

(In millions of won)

46. Transition effects arising from changes in accounting policies (continued)

(a) Changes in equity due to application of K-IFRS No.1109 and No.1115

Changes in equity as of January 1, 2018 due to the initial application date of K-IFRS No.1109 and No.1115 were as follows:

		Amounts
Retained earnings at January 1, 2018 before changes (*1)	₩	14,142,545
Adjustments of retained earnings due to the application of K-IFRS No.1109:		
Reclassification from financial assets at amortized cost to financial assets at FVTPL		2,456
Reclassification from available-for-sale financial assets to financial assets at FVTPL		62,635
Reclassification from available-for-sale financial assets to financial assets at FVOCI		200,339
Increase in loss allowance for financial assets at amortized cost		(372,519)
Increase in loss allowance for loan commitments and financial guarantee contracts		5,838
Increase in loss allowance for debt instruments at FVOCI		(17,099)
Others (*2)		(4,723)
		(123,073)
Adjustments of retained earnings due to the application of K-IFRS No.1115 (*3)		(2,554)
Tax effects (*4)		35,214
Retained earnings at January 1, 2018 after changes	₩	14,052,132

		Amounts
Accumulated other comprehensive loss at January 1, 2018 before changes	₩	(490,772)
Adjustments of accumulated other comprehensive income due to the application of K-IFRS No.1109:		
Reclassification from available-for-sale financial assets to financial assets at FVTPL		(62,635)
Reclassification from available-for-sale financial assets to financial assets at FVOCI		(200,339)
Increase in loss allowance for debt instruments at FVOCI		17,099
Others (*2)		3,285
		(242,590)
Tax effects (*4)		69,569
Accumulated other comprehensive loss at January 1, 2018 after changes	₩	(663,793)

(*1) Retained earnings at January 1, 2018 were retrospectively restated as the accounting treatment for the business combination on ANZ Vietnam retail business was completed during the year ended December 31, 2018.
(*2) Others represent translation difference of foreign currencies, etc.
(*3) Adjustments were resulting from deferred fee income on management of trust accounts under K-IFRS No.1115, which was previously recognized as profit or loss at a point in time.
(*4) Tax effects due to the application of K-IFRS No.1109 were separately shown.

(In millions of won)

46. Transition effects arising from changes in accounting policies (continued)

(b) Reclassification of financial instruments upon adoption of K-IFRS No.1109

Details of reclassification of financial instruments as of January 1, 2018, the initial application date of K-IFRS No.1109, were as follows:

	Classification under K-IFRS No.1039	Classification under K-IFRS No.1109		Amounts under K-IFRS No.1039 (*1)	Amounts under K-IFRS No.1109 (*1)	Difference
Financial assets:						
Due from banks	Loans and receivables	Amortized cost	₩	16,926,471	16,926,471	-
Loans	Loans and receivables	Financial assets at FVTPL		605,367	606,439	1,072
	Loans and receivables	Amortized cost		232,633,346	232,633,346	-
Other financial assets	Loans and receivables	Amortized cost		9,107,156	9,107,156	-
Trading assets (debt securities)	Trading assets	Financial assets at FVTPL		10,506,358	10,506,358	-
Trading assets (equity securities)	Trading assets	Financial assets at FVTPL		520,743	520,743	-
Trading assets (gold/silver deposits)	Trading assets	Financial assets at FVTPL		189,297	189,297	-
Derivatives	Trading assets	Financial assets at FVTPL		2,604,090	2,599,727	(4,363)
Available-for-sale financial assets (debt securities)	Available-for-sale financial assets	Financial assets at FVTPL		11,801	11,801	-
	Available-for-sale financial assets	Financial assets at FVOCI		29,947,367	29,947,367	-
Available-for-sale financial assets (equity securities)	Available-for-sale financial assets	Financial assets at FVTPL		2,130,117	2,133,398	3,281
	Available-for-sale financial assets	Financial assets at FVOCI		406,255	406,255	-
Held-to-maturity financial assets (debt securities)	Held-to-maturity financial assets	Amortized cost		14,822,898	14,822,898	-
			₩	320,411,266	320,411,256	(10)
Financial liabilities:						
Deposits	Financial liability at amortized cost	Financial liabilities at amortized cost	₩	242,653,744	242,653,744	-
Trading liabilities	Trading liabilities	Financial liabilities at FVTPL		434,586	434,586	-
Derivatives	Trading liabilities	Financial liabilities at FVTPL		2,992,936	2,992,936	-
Borrowings	Financial liabilities at amortized cost	Financial liabilities at amortized cost		14,617,562	14,617,562	-
Debt securities issued	Financial liabilities at amortized cost	Financial liabilities at amortized cost		25,460,427	25,460,427	-
Others	Financial liabilities at amortized cost	Financial liabilities at amortized cost		14,934,540	14,934,521	(19)
			₩	301,093,795	301,093,776	(19)

(*1) Represents gross carrying amounts before deferred loan origination costs and fees, allowance for loan loss and credit loss allowance.

(In millions of won)

46. Transition effects arising from changes in accounting policies (continued)

(c) Impairment of financial assets upon adoption of K-IFRS No.1109

Changes of credit loss allowance as of January 1, 2018, the initial application date of K-IFRS No.1109, were as follows:

Classification under K-IFRS No.1039	Classification under K-IFRS No.1109		Loss allowance under K-IFRS No.1039	Loss allowance under K-IFRS No.1109	Difference
Loans and receivables					
Due from banks	Financial assets at amortized cost	₩	14,046	15,051	1,005
Loan receivables	Financial assets at amortized cost		1,503,242	1,869,815	366,573
	Financial assets at FVTPL		3,315	-	(3,315)
Other financial assets	Financial assets at amortized cost		26,252	26,923	671
Available-for-sale financial assets					
Debt securities	Financial assets at FVOCI		-	17,098	17,098
Held-to-maturity financial assets					
Debt securities	Financial assets at amortized cost		-	7,585	7,585
			1,546,855	1,936,472	389,617
Financial guarantee	Financial guarantee		35,436	36,148	712
Unused credit line and other credit commitment	Unused credit line and other credit commitment		93,241	86,691	(6,550)
		₩	128,677	122,839	(5,838)

(In millions of won)

46. Transition effects arising from changes in accounting policies (continued)

(d) Details in reclassification of financial instruments from application of K-IFRS No.1109

For the financial assets and liabilities as of January 1, 2018, the date of the initial application of K-IFRS No.1109, details of reclassifications and remeasurements in the Group's financial assets and liabilities from application of K-IFRS No.1109 were as follows:

1) Effects on gross carrying amounts

		Amounts under K-IFRS No.1039 (*1)	Amounts reclassified	Amounts remeasured	Amounts under K-IFRS No.1109 (*1)	Changes in retained earnings	Changes in other comprehensive income
Financial assets:							
Due from banks							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018	₩	16,926,471	-	-	16,926,471	-	-
Loans							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		233,238,713	-	-	233,238,713	-	-
Reclassification to financial assets at FVTPL (*2)		-	(605,367)	-	(605,367)	-	-
		233,238,713	(605,367)	-	232,633,346	-	-
Other financial assets							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		9,107,156	-	-	9,107,156	-	-
Trading assets (debt securities) (*4)							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		10,506,358	-	-	10,506,358	-	-
Reclassification to financial assets at FVTPL		-	(10,506,358)	-	(10,506,358)	-	-
		10,506,358	(10,506,358)	-	-	-	-
Trading assets (equity securities)							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		520,743	-	-	520,743	-	-
Reclassification to financial assets at FVTPL		-	(520,743)		(520,743)	-	-
		520,743	(520,743)		-	-	-
Trading assets (gold deposits)							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		189,297	-		189,297	-	-
Reclassification to financial assets at FVTPL		-	(189,297)		(189,297)	-	-
		189,297	(189,297)		-	-	-
Derivative assets							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		2,604,090	-		2,604,090	-	-
Reclassification to financial assets at FVTPL		-	(4,363)		(4,363)	-	-
		2,604,090	(4,363)		2,599,727	-	-
Available-for-sale financial assets (debt securities)							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		29,959,168	-		29,959,168	-	-
Reclassification to financial assets at FVTPL		-	(11,801)		(11,801)	-	-
Reclassification to financial assets at FVOCI		-	(29,947,367)		(29,947,367)	-	-
		29,959,168	(29,959,168)		-	-	-

(*1) Represents gross carrying amounts before deferred loan origination costs and fees, allowance for loan loss and credit loss allowance.

(In millions of won)

46. Transition effects arising from changes in accounting policies (continued)

(d) Details in reclassification of financial instruments from application of K-IFRS No.1109 (continued)

		Amounts under K-IFRS No.1039 (*1)	Amounts reclassified	Amounts remeasured	Amounts under K-IFRS No.1109 (*1)	Changes in retained earnings	Changes in other comprehensive income
Available-for-sale financial assets (equity securities)							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018	₩	2,536,372	-	-	2,536,372	-	-
Reclassification to financial assets at FVTPL (*3)		-	(2,130,117)	-	(2,130,117)	-	-
Reclassification to financial assets at FVOCI		-	(406,255)	-	(406,255)	-	-
		2,536,372	(2,536,372)	-	-	-	-
Held-to-maturity financial assets							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		14,822,898	-	-	14,822,898	-	-
Reclassification to financial assets at amortized cost		-	(14,822,898)	-	(14,822,898)	-	-
		14,822,898	(14,822,898)	-	-	-	-
Financial assets at FVTPL							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		-	-	-	-	-	-
Transfer from loans and receivables		-	605,367	2,456	607,823	2,456	-
Transfer from trading assets		-	11,216,398	-	11,216,398	-	-
Transfer from available-for-sale financial assets		-	2,141,918	-	2,141,918	62,635	(62,635)
Transfer from derivative assets		-	4,363	109	4,472	109	-
Others		-	(2,575)	-	(2,575)	-	-
		-	13,965,471	2,565	13,968,036	65,200	(62,635)
Financial assets at FVOCI (*5)							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		-	-	-	-	-	-
Transfer from available-for-sale financial assets		-	30,353,622	-	30,353,622	200,339	(200,339)
		-	30,353,622	-	30,353,622	200,339	(200,339)
Financial assets at amortized cost (*5)							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		-	-	-	-	-	-
Transfer from held-to-maturity financial assets		-	14,822,898	-	14,822,898	-	-
		-	14,822,898	-	14,822,898	-	-
	₩	320,411,266	(2,575)	2,565	320,411,256	265,539	(262,974)
Financial liabilities							
Deposits							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018	₩	242,653,744	-	-	242,653,744	-	-
Trading liabilities							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		434,586	-	-	434,586	-	-
Reclassification to financial liabilities at FVTPL		-	(434,586)	-	(434,586)	-	-
		434,586	(434,586)	-	-	-	-
Financial liabilities at FVTPL							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		-	-	-	-	-	-
Transfer from trading liabilities		-	434,586	-	434,586	-	-
		-	434,586	-	434,586	-	-

(*1) Represents gross carrying amounts before deferred loan origination costs and fees, allowance for loan loss and credit loss allowance.

(In millions of won)

46. Transition effects arising from changes in accounting policies (continued)

(d) Details in reclassification of financial instruments from application of K-IFRS No.1109 (continued)

		Amounts under K-IFRS No.1039 (*1)	Amounts reclassified	Amounts remeasured	Amounts under K-IFRS No.1109 (*1)	Changes in retained earnings	Changes in other comprehensive income
Derivative liabilities							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018	₩	2,992,936	-	-	2,992,936	-	-
Borrowings							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		14,617,562	-	-	14,617,562	-	-
Debt securities issued							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		25,460,427	-	-	25,460,427	-	-
Other financial liabilities							
Carrying amounts under K-IFRS No.1039 as of January 1, 2018		14,934,540	-	-	14,934,540	-	-
Others		-	-	(19)	(19)	-	-
		14,934,540	-	(19)	14,934,521	-	-
	₩	301,093,795	-	(19)	301,093,776	-	-

(*1) Represents gross carrying amounts before deferred loan origination costs and fees, allowance for loan loss and credit loss allowance.

(*2) Loans and receivables amounted to ₩605,367 million under K-IFRS No.1039 have been reclassified to financial assets at FVTPL from application of K-IFRS No.1109. The reasons for reclassification were as follows:

Classification		Amounts
Reclassification by business model for financial asset management	₩	495,700
Financial assets not qualifying characteristics of contractual cash flows that are solely payments of principal and interest		109,667
	₩	605,367

(*3) Equity securities amounted to ₩2,130,117 million under K-IFRS No.1039, which were classified as available-for-sale financial assets, have been reclassified to financial assets at FVTPL from application of K-IFRS No.1109. The reasons for reclassification were as follows:

Classification		Amounts
Financial asset not qualifying characteristics of contractual cash flows that are solely payments of principal and interest of puttable financial instruments	₩	1,979,670
No designation of financial assets at FVOCI		150,447
	₩	2,130,117

(*4) With respect to financial assets and financial liabilities reclassified from financial assets at FVTPL, effective interest rates calculated on the initial application date of K-IFRS No.1109 and interest income or expense recognized shall be disclosed. Such reclassification has not occurred from the application of K-IFRS No.1109.

(*5) With respect to financial assets and financial liabilities reclassified to financial instruments at amortized cost, and financial assets at FVTPL reclassified to financial assets at FVOCI, the gain or loss on fair value measurement that would otherwise have been recognized in profit or loss or other comprehensive income in the reporting period, and the fair value of the financial assets or financial liabilities, shall be disclosed. Such reclassification has not occurred from application of K-IFRS No.1109.

(In millions of won)

46. Transition effects arising from changes in accounting policies (continued)

(iv) Details in reclassification of financial instruments from application of K-IFRS No.1109 (continued)

2) Credit loss allowance

		Amounts under K-IFRS No.1039	Amounts reclassified	Amounts remeasured	Amounts under K-IFRS No.1109	Changes in retained earnings	Changes in other comprehensive income
Credit loss allowance for							
Due from banks	₩	14,046	-	1,005	15,051	(1,005)	-
Loans and receivables		1,506,557	(3,315)	366,572	1,869,814	(363,257)	-
Financial guarantee		35,436	-	712	36,148	(712)	-
Unused credit line and other credit commitment		93,241	-	(6,550)	86,691	6,550	-
Debt securities at FVOCI		-	-	17,098	17,098	(17,098)	17,098
Debt securities at amortized cost		-	-	7,585	7,585	(7,585)	-
Other financial assets		26,252	-	671	26,923	(671)	-
	₩	1,675,532	(3,315)	387,093	2,059,310	(383,778)	17,098

(v) Hedge accounting

K-IFRS No.1109 maintains the mechanics of hedge accounting (i.e. fair value hedge, cash flow hedge, hedge of a net investment in a foreign operation) as defined in K-IFRS No.1039, whereas a principle-based hedge accounting requirements that focuses on an entity's risk replaced complex and rule-based hedge accounting requirements in K-IFRS No.1039. Additionally, qualifying hedged items and qualifying hedging instruments have been expanded and hedge accounting requirements have been eased by eliminating a subsequent hedge effectiveness assessment and a quantitative test (80~125%).

Hedge accounting can be applied to certain transactions that fail to qualify for hedge accounting requirements under K-IFRS No.1039 when applying K-IFRS No.1109, and thus alleviates profit or loss volatility.

The Group applied the requirements for hedge accounting under K-IFRS No.1109 as much as possible to the risk management activities that meet the requirements for hedge accounting. As of December 31, 2018, there were no transactions that failed to qualify for hedge accounting requirements under K-IFRS No.1039 but for which hedge accounting was applied under K-IFRS No.1109.

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