WOORI FINANCIAL GROUP INC.
Form 20-F
April 30, 2019
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As filed with the Securities and Exchange Commission on April 30, 2019

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 20-F

(Mark One)

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2018

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report __________

Commission file number 001-31811

Woori Financial Group Inc.

(Exact name of Registrant as specified in its charter)

Woori Financial Group Inc.

(Translation of Registrant s name into English)

The Republic of Korea

(Jurisdiction of incorporation or organization)

51, Sogong-ro, Jung-gu, Seoul 04632, Korea

(Address of principal executive offices)

Jeong Soo Lee

51, Sogong-ro, Jung-gu, Seoul 04632, Korea

Telephone No.: +82-2-2125-2050

Facsimile No.: +82-0505001-0451

(Name, telephone, e-mail and/or facsimile number and address of company contact person)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

Title of each class	Name of each exchange on which registered
American Depositary Shares, each representing three shares of Common Stock	**New York Stock Exchange**
Common Stock, par value 5,000 per share	**New York Stock Exchange***

Securities registered or to be registered pursuant to Section 12(g) of the Act:

None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None

Indicate the number of outstanding shares of each of the issuer s classes of capital or common stock as of the close of the period covered by the annual report.

680,164,306 shares of Common Stock, par value 5,000 per share

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See the definitions of large accelerated filer, accelerated filer, and emerging growth company in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated Filer Non-accelerated filer Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

The term new or revised financial accounting standard refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP International Financial Reporting Standards as issued by the International Accounting Standards Board Other

If other has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. Item 17 Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes No

* Not for trading, but only in connection with the registration of the American Depositary Shares.

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EXPLANATORY NOTE

We were established on January 11, 2019 pursuant to a comprehensive stock transfer under Korean law, whereby holders of the common stock of Woori Bank and certain of its subsidiaries transferred all of their shares to us, a new financial holding company, and in return received shares of our common stock.

As a result of the stock transfer, Woori Bank and certain of its former wholly-owned subsidiaries, Woori FIS Co., Ltd., Woori Finance Research Institute Co., Ltd., Woori Credit Information Co., Ltd., Woori Fund Services Co., Ltd. and Woori Private Equity Asset Management Co., Ltd., became our direct and wholly-owned subsidiaries. Accordingly, our overall business and operations after the stock transfer, on a consolidated basis, are identical to those of Woori Bank on a consolidated basis immediately prior to the stock transfer. See Item 4.A. History and Development of the Company Establishment of Woori Financial Group.

The stock transfer constituted a succession for purposes of Rule 12g-3(a) under the Securities Exchange Act of 1934, as amended, such that our common stock was deemed registered under Section 12(b) of the Exchange Act by operation of Rule 12g-3(a). Following the stock transfer, we file reports under the Exchange Act as the successor issuer to Woori Bank.

In our consolidated financial statements for financial reporting periods beginning on or after January 1, 2019, the stock transfer will be accounted for as a transaction among entities under common control applying the pooling of interests method of accounting. We will initially recognize the transferred assets and liabilities at their book value as of the date of the stock transfer in such consolidated financial statements, and no goodwill will be recognized in connection with the transaction. As our establishment pursuant to the stock transfer occurred after December 31, 2018, the historical consolidated financial statements included in this annual report were prepared based on the consolidated financial statements for Woori Bank and its subsidiaries under International Financial Reporting Standards, or IFRS, as issued by the International Accounting Standards Board, or the IASB, except that Woori FIS Co., Ltd., Woori Finance Research Institute Co., Ltd., Woori Credit Information Co., Ltd., Woori Fund Services Co., Ltd. and Woori Private Equity Asset Management Co., Ltd. were consolidated on a line-by-line basis instead of being presented as assets and liabilities held for distribution. Unless expressly stated otherwise, all historical financial data included in this annual report are for Woori Bank and its subsidiaries, on a consolidated basis, with the foregoing modification.

Unless otherwise indicated or required by the context, we, us, our and similar terms used in this annual report refer to Woori Financial Group and its subsidiaries (including Woori Bank) and, for periods prior to the establishment of Woori Financial Group in January 2019 pursuant to the stock transfer, refer to Woori Bank and its subsidiaries.

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PRESENTATION OF FINANCIAL AND OTHER INFORMATION

The financial statements included in this annual report are prepared in accordance with IFRS as issued by the IASB.

Unless expressly stated otherwise, all financial data included in this annual report are presented on a consolidated basis.

In this annual report:

references to Korea are to the Republic of Korea;

references to the government are to the government of the Republic of Korea;

references to Won or are to the currency of Korea;

references to U.S. dollars, $ or US$ are to the currency of the United States; and

references to Euros or EUR are to the currency of the European Economic and Monetary Union.

Discrepancies between totals and the sums of the amounts contained in any table may be a result of rounding.

For your convenience, this annual report contains conversions of Won amounts into U.S. dollars at the noon buying rate of the Federal Reserve Bank of New York for Won in effect on December 31, 2018, which was 1,112.9 = US$1.00.

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FORWARD-LOOKING STATEMENTS

The U.S. Securities and Exchange Commission encourages companies to disclose forward-looking information so that investors can better understand a company s future prospects and make informed investment decisions. This annual report contains forward-looking statements.

Words and phrases such as aim, anticipate, assume, believe, contemplate, continue, estimate, expect, intend, may, objective, plan, positioned, predict, project, risk, seek to, shall, should, will like words and terms of similar substance used in connection with any discussion of future operating or financial performance or our expectations, plans, projections or business prospects identify forward-looking statements. In particular, the statements under the headings Item 3.D. Risk Factors, Item 4.B. Business Overview and Item 5. Operating and Financial Review and Prospects regarding our financial condition and other future events or prospects are forward-looking statements. All forward-looking statements are management s present expectations of future events and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements.

In addition to the risks related to our business discussed under Item 3.D. Risk Factors, other factors could cause actual results to differ materially from those described in the forward-looking statements. These factors include, but are not limited to:

- a change or delay in, or cancellation of, the Korean government s privatization plan with respect to us;
- our ability to successfully implement our strategy;
- future levels of non-performing loans;
- our growth and expansion;
- the adequacy of allowances for credit and other losses;
- technological changes;
- interest rates;
- investment income;
- availability of funding and liquidity;

- our exposure to market risks; and
- adverse market and regulatory conditions.

By their nature, certain disclosures relating to these and other risks are only estimates and could be materially different from what actually occurs in the future. As a result, actual future gains, losses or impact on our income or results of operations could materially differ from those that have been estimated. For example, revenues could decrease, costs could increase, capital costs could increase, capital investment could be delayed and anticipated improvements in performance might not be fully realized.

In addition, other factors that could cause actual results to differ materially from those estimated by the forward-looking statements contained in this annual report could include, but are not limited to:

- general economic and political conditions in Korea or other countries that have an impact on our business activities or investments;
- the monetary and interest rate policies of Korea;
- inflation or deflation;
- unanticipated volatility in interest rates;
- foreign exchange rates;

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- prices and yields of equity and debt securities;
- the performance of the financial markets in Korea and globally;
- changes in domestic and foreign laws, regulations and taxes;
- changes in competition and the pricing environment in Korea; and
- regional or general changes in asset valuations.

For further discussion of the factors that could cause actual results to differ, see the discussion under Item 3.D. Risk Factors contained in this annual report. We caution you not to place undue reliance on the forward-looking statements, which speak only as of the date of this annual report. Except as required by law, we are not under any obligation, and expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise.

All subsequent forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this annual report.

Item 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not Applicable

Item 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not Applicable

Item 3. KEY INFORMATION

Item 3.A. *Selected Financial Data*

The selected consolidated financial and operating data set forth below as of and for the years ended December 31, 2014, 2015, 2016, 2017 and 2018 have been derived from our audited consolidated financial statements, which have been prepared in accordance with IFRS as issued by the IASB. Our consolidated financial statements as of and for the years ended December 31, 2014, 2015, 2016, 2017 and 2018 have been audited by Deloitte Anjin LLC, an independent registered public accounting firm.

IFRS 9 *Financial Instruments*, or IFRS 9, is effective for annual periods beginning on or after January 1, 2018 and replaces International Accounting Standard 39 *Financial Instruments: Recognition and Measurement*, or IAS 39. We have applied IFRS 9 in our consolidated financial statements as of and for the year ended December 31, 2018 included elsewhere in this annual report. As permitted by the transition rules of IFRS 9, our consolidated financial statements as of and for the year ended December 31, 2016 and 2017 included elsewhere in this annual report have not been restated to retroactively apply IFRS 9. For information regarding the impact of the application of IFRS 9 to our consolidated financial statements, see Item 5.A. Operating Results Overview Changes in Accounting Standards and Note 2-(1)-1)-a) of the notes to our consolidated financial statements included elsewhere in this annual report.

The Korean government, which currently owns 18.32% of our outstanding common stock through the Korea Deposit Insurance Corporation, or the KDIC, has been implementing a privatization plan with respect to us and our subsidiaries. As a result of the dispositions of ownership interests in Kwangju Bank, Kyongnam Bank, Woori Investment & Securities, Woori Aviva Life Insurance, Woori Asset Management, Woori Financial, Woori FG Savings Bank and Woori F&I by Woori Finance Holdings Co., Ltd., Woori Bank s former parent company, in 2014, these former subsidiaries of Woori Finance Holdings have been accounted for as discontinued operations in our consolidated statement of comprehensive income for the year ended December 31, 2014. See Item 4.A. History and Development of the Company Privatization Plan.

You should read the following data together with the more detailed information contained in Item 5. Operating and Financial Review and Prospects and our consolidated financial statements included elsewhere in this annual report. Historical results do not necessarily predict future results.

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Consolidated Statement of Comprehensive Income Data

	Year ended December 31,					
	2014(1)	2015	2016	2017	2018	2018(2)
	(in billions of Won except per share data)					(in millions of US$ except per share data)
Interest income	9,211	8,698	8,512	8,551	9,684	US$ 8,702
Interest expense	(4,718)	(3,936)	(3,492)	(3,330)	(4,033)	(3,624)
Net interest income	4,493	4,762	5,020	5,221	5,651	5,078
Fees and commissions income	1,598	1,757	1,865	2,069	1,681	1,510
Fees and commissions expense	(681)	(781)	(928)	(999)	(611)	(549)
Net fees and commissions income	917	976	937	1,070	1,070	961
Dividend income	97	103	185	125	91	81
Net gain on financial assets at fair value through profit or loss (IFRS 9)					214	193
Net gain (loss) on financial assets at fair value through profit or loss (IAS 39)	190	240	114	(105)		
Net gain on financial assets at fair value through other comprehensive income					2	2
Net gain (loss) on available-for-sale financial assets	(69)	(3)	(1)	193		
Net gain arising on financial assets at amortized cost					80	71
Impairment losses due to credit loss	(1,097)	(966)	(834)	(785)	(330)	(296)
General and administrative expenses	(2,959)	(3,151)	(3,479)	(3,531)	(3,624)	(3,256)
Other net operating expenses(3)	(674)	(610)	(368)	(31)	(395)	(355)
Operating income	898	1,351	1,574	2,157	2,759	2,479
Share of loss of joint ventures and associates	(68)	(70)	(20)	(101)	3	3
Other net non-operating income (expense)	4	171	(1)	(106)	43	38
Non-operating income (loss)	(64)	101	(21)	(207)	46	41
Net income before income tax expense	834	1,452	1,553	1,950	2,805	2,520
Income tax expense	(288)	(377)	(276)	(420)	(753)	(677)
Net income from continuing operations	546	1,075	1,277	1,530	2,052	1,843

Net income (loss) from discontinued operations	662						
Net income	1,208	1,075	1,277	1,530	2,052	US$	1,843
Net loss on valuation of equity securities at fair value through other comprehensive income					(31)		(28)
Items out of change in equity method securities due to change in equity of investee that will not be reclassified to profit or loss				(3)			
Remeasurement gain (loss) related to defined benefit plan	(52)	(78)	34	10	(85)		(76)
Items that will not be reclassified to profit or loss	(52)	(78)	34	7	(116)		(104)
Net gain on valuation of debt securities at fair value through other comprehensive income					33		30
Gain (loss) on available-for-sale financial assets	(75)	72	13	(85)			
Share of other comprehensive income (loss) of joint ventures and associates	(2)	3	(8)	4	3		3
Gain (loss) on foreign currency translation of foreign operations	48	34	29	(208)	(4)		(4)
Gain (loss) on valuation of cash flow hedge	(27)		10	1	(5)		(4)
Gain (loss) on disposal of assets held for sale				4	(4)		(4)
Items that may be reclassified to profit or loss	(56)	109	44	(284)	23		21
Other comprehensive gain (loss), net of tax	(108)	31	78	(277)	(93)		(83)
Total comprehensive income	1,100	1,106	1,355	1,253	1,959	US$	1,760
Net income attributable to owners	1,214	1,059	1,261	1,512	2,033	US$	1,827
Income from continuing operations	435	1,059	1,261	1,512	2,033		1,827
Income (loss) from discontinued operations	779						
Net income (loss) attributable to non-controlling interests	(6)	16	16	18	19	US$	16
Income from continuing operations	111	16	16	18	19		16
Loss from discontinued operations	(117)						
Comprehensive income attributable to owners	1,192	1,095	1,332	1,249	1,944		1,747
Comprehensive income (loss) attributable to non-controlling	(92)	11	23	4	15		13

interests							
Basic and diluted earnings (loss) from continuing and discontinued operations per share	1,621	1,301	1,567	1,999	2,796	US$	2.512
Basic and diluted earnings from continuing operations per share	536	1,301	1,567	1,999	2,796		2.512
Per common share data:							
Net income (loss) per share basic	1,621	1,301	1,567	1,999	2,796	US$	2.512
Weighted average common shares outstanding basic (in thousands)	718,265	673,271	673,271	673,271	673,271		673,271
Net income (loss) per share diluted	1,621	1,301	1,567	1,999	2,796	US$	2.512
Weighted average common shares outstanding diluted (in thousands)	718,265	673,271	673,271	673,271	673,271		673,271
Cash dividends paid per share	500	500	400	500	650	US$	0.58

(1) The amounts for 2014 reflect the classification of certain former subsidiaries of Woori Finance Holdings as discontinued operations.

(2) Won amounts are expressed in U.S. dollars at the rate of 1,112.9 to US$1.00, the noon buying rate in effect on December 31, 2018 as quoted by the Federal Reserve Bank of New York in the United States.

(3) For a description of Other net operating expenses, see Note 39 of the notes to our consolidated financial statements.

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Consolidated Statement of Financial Position Data

	As of December 31,					
	2014	2015	2016	2017	2018	2018(1)
	(in billions of Won)					(in millions of US$)
Assets						
Cash and cash equivalents	5,963	6,644	7,591	6,908	6,748	US$ 6,063
Financial assets at fair value through profit or loss (IFRS 9)					6,126	5,505
Financial assets at fair value through profit or loss (IAS 39)	4,554	5,133	5,651	5,843		
Financial assets at fair value through other comprehensive income					18,063	16,231
Available-for-sale financial assets	18,811	17,171	20,818	15,353		
Securities at amortized cost					22,933	20,606
Held-to-maturity financial assets	13,044	13,622	13,910	16,749		
Loans and other financial assets at amortized cost					282,458	253,803
Loans and receivables	223,370	244,842	258,393	267,106		
Investments in joint ventures and associates	648	644	439	417	362	325
Investment properties	358	351	358	371	378	340
Premises and equipment	2,501	2,471	2,458	2,478	2,450	2,202
Intangible assets and goodwill	296	420	484	519	598	537
Assets held for sale	8	18	2	49	18	16
Current tax assets	5	7	6	5	21	19
Deferred tax assets	258	210	232	280	59	53
Derivative assets (designated for hedging)	196	183	141	59	36	32
Other assets(2)	145	143	200	158	197	178
Total assets	270,157	291,859	310,683	316,295	340,447	US$ 305,910
Liabilities						
Financial liabilities at fair value through profit or loss (IFRS 9)					2,283	US$ 2,051
Financial liabilities at fair value through profit or loss (IAS 39)	2,675	3,461	3,803	3,428		
Deposits due to customers	188,516	209,142	221,020	234,695	248,691	223,462
Borrowings	17,708	20,034	18,770	14,785	16,203	14,559
Debentures	24,796	21,899	23,566	27,869	28,736	25,821
Provisions	692	517	429	410	391	352
Net defined benefit liability	75	99	65	43	173	156
Current tax liabilities	299	109	171	233	159	143

Deferred tax liabilities	22	19	22	23	18	16
Derivative liabilities (designated for hedging)			7	68	51	46
Other financial liabilities[3]	16,890	16,964	21,985	13,892	21,443	19,267
Other liabilities[4]	391	305	299	284	346	311
Total liabilities	252,064	272,549	290,137	295,730	318,494	US$ 286,184
Equity						
Owners equity						
Capital stock	3,381	3,381	3,381	3,381	3,381	US$ 3,038
Hybrid securities	2,539	3,334	3,575	3,018	3,162	2,841
Capital surplus	291	294	286	286	286	257
Other equity[5]	(2,393)	(1,547)	(1,468)	(1,939)	(2,214)	(1,989)
Retained earnings	14,165	13,726	14,612	15,620	17,125	15,387
Non-controlling interests	110	122	160	199	213	192
Total equity	18,093	19,310	20,546	20,565	21,953	US$ 19,726
Total liabilities and equity	270,157	291,859	310,683	316,295	340,447	US$ 305,910

(1) Won amounts are expressed in U.S. dollars at the rate of 1,112.9 to US$1.00, the noon buying rate in effect on December 31, 2018 as quoted by the Federal Reserve Bank of New York in the United States.

(2) For a description of other assets, see Note 19 of the notes to our consolidated financial statements.

(3) For a description of other financial liabilities, see Note 25 of the notes to our consolidated financial statements.

(4) For a description of other liabilities, see Note 25 of the notes to our consolidated financial statements.

(5) For a description of other equity, see Note 30 of the notes to our consolidated financial statements.

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Profitability Ratios and Other Data

	Year ended December 31,				
	2014[1]	2015	2016	2017	2018
	(in billions of Won except percentages)				
Return on average assets[2]	0.47%	0.37%	0.41%	0.49%	0.62%
Return on average equity[3]	6.74	5.62	6.26	7.25	9.36
Net interest spread[4]	1.72	1.67	1.65	1.69	1.74
Net interest margin[5]	1.82	1.74	1.71	1.74	1.80
Cost-to-income ratio[6]	68.38	66.22	66.48	60.79	59.98
Average equity as a percentage of average total assets	7.03	6.63	6.60	6.71	6.67
Total revenue[7]	11,027	10,795	10,675	10,833	11,752
Operating expense[8]	9,032	8,478	8,267	7,891	8,663
Operating margin[9]	1,995	2,317	2,408	2,942	3,089
Operating margin as a percentage of total revenue	18.09%	21.46%	22.56%	27.16%	26.28%

(1) The amounts for 2014 exclude certain former subsidiaries of Woori Finance Holdings classified as discontinued operations.

(2) Represents net income attributable to owners as a percentage of average total assets. Average balances are based on daily balances for Woori Bank and on quarterly balances for all of our other subsidiaries and our structured companies.

(3) Represents net income attributable to owners as a percentage of average equity. Average balances are based on daily balances for Woori Bank and on quarterly balances for all of our subsidiaries and our structured companies.

(4) Represents the difference between the yield on average interest-earning assets and cost of average interest-bearing liabilities.

(5) Represents the ratio of net interest income to average interest-earning assets.

(6) Represents the ratio of non-interest expense (excluding impairment losses due to credit loss) to the sum of net interest income and non-interest income.

(7) Represents the sum of interest income, dividend income, fees and commissions income, net gain (loss) on financial instruments at fair value through profit or loss, net gain on financial assets at fair value through other comprehensive income and net gain arising on financial assets at amortized cost (or net gain (loss) on available-for-sale financial assets).

The following table shows how total revenue is calculated:

	Year ended December 31,				
	2014[a]	2015	2016	2017	2018
	(in billions of Won)				
Interest income	9,211	8,698	8,512	8,551	9,684
Fees and commissions income	1,598	1,757	1,865	2,069	1,681
Dividend income	97	103	185	125	91

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Net gain on financial assets at fair value through profit or loss (IFRS 9)					
Net gain (loss) on financial assets at fair value through profit or loss (IAS 39)	190	240	114	(105)	
Net gain on financial assets at fair value through other comprehensive income					2
Net gain (loss) on available-for-sale financial assets	(69)	(3)	(1)	193	
Net gain arising on financial assets at amortized cost					80
Total revenue	11,027	10,795	10,675	10,833	11,752

(a) The amounts for 2014 exclude certain former subsidiaries of Woori Finance Holdings classified as discontinued operations.

(8) Represents interest expense, fees and commissions expense, general and administrative expense and other net operating expense, excluding impairment losses due to credit loss of 1,097 billion, 966 billion, 834 billion, 785 billion and 330 billion for 2014, 2015, 2016, 2017 and 2018, respectively.

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The following table shows how operating expense is calculated:

	Year ended December 31,				
	2014[(a)]	2015	2016	2017	2018
	(in billions of Won)				
Interest expense	4,718	3,936	3,492	3,330	4,033
Fees and commissions expense	681	781	928	999	611
General and administrative expense	2,959	3,151	3,479	3,531	3,624
Other net operating expenses	674	610	368	31	395
Operating expense	9,032	8,478	8,267	7,891	8,663

(a) The amounts for 2014 exclude certain former subsidiaries of Woori Finance Holdings classified as discontinued operations.

(9) Represents total revenue less operating expense.

Asset Quality Data

	As of December 31,				
	2014	2015	2016	2017	2018
	(in billions of Won, except percentages)				
Total loans[(1)]	207,077	227,169	236,801	252,793	262,034
Total non-performing loans[(2)]	3,818	2,909	2,080	1,853	1,329
Other impaired loans not included in non-performing loans	692	339	335	374	292
Total non-performing loans and other impaired loans	4,510	3,248	2,415	2,227	1,621
Total allowance for credit losses	2,609	2,051	1,851	1,770	1,778
Non-performing loans as a percentage of total loans	1.84%	1.28%	0.88%	0.73%	0.51%
Non-performing loans as a percentage of total assets	1.41	1.00	0.67	0.59	0.39
Total non-performing loans and other impaired loans as a percentage of total loans	2.18	1.43	1.02	0.88	0.62
Allowance for credit losses as a percentage of total loans	1.26	0.90	0.78	0.70	0.68

(1) Not including due from banks and other financial assets (or other receivables), and prior to deducting allowance for credit losses and present value discount or reflecting deferred origination costs.

(2) Defined as those loans that are past due by 90 days or more or classified as substandard or below based on the Financial Services Commission s asset classification criteria. See Item 4.B. Business Overview Assets and

Liabilities Asset Quality of Loans Loan Classifications.

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Selected Financial Information

Average Balances and Related Interest

The following tables show our average balances and interest rates for the past three years:

	Year ended December 31,								
	2016			2017			2018		
	Average Balance(1)	Interest Income(2)	Average Yield	Average Balance(1)	Interest Income(2)	Average Yield	Average Balance(1)	Interest Income(2)	Average Yield
	(in billions of Won, except percentages)								
Assets									
Interest-earning assets									
Due from banks	14,807	75	0.51%	15,594	83	0.53%	16,027	113	0.71%
Loans(3)									
Commercial and industrial	98,202	3,220	3.28	95,349	3,141	3.29	104,269	3,437	3.30
Trade financing	13,159	213	1.62	12,155	240	1.97	11,916	315	2.64
Lease financing(4)	4			35	1	3.73	111	4	3.52
Other commercial	9,697	221	2.28	9,064	211	2.33	11,038	270	2.45
General purpose household(5)	61,918	2,111	3.41	66,420	2,287	3.44	67,042	2,647	3.95
Mortgage	45,007	1,323	2.94	47,545	1,405	2.96	48,445	1,559	3.22
Credit cards(2)	6,300	547	8.68	6,772	551	8.14	7,445	600	8.06
Total loans	234,287	7,635	3.26	237,340	7,836	3.30	250,266	8,832	3.53
Securities									
Trading(6)	2,665	63	2.36	2,712	53	1.95	3,955	54	1.37
Investment(7)	31,348	700	2.23	32,881	548	1.67	32,404	657	2.03
Total securities	34,013	763	2.24	35,593	601	1.69	36,359	711	1.96
Other	11,157	39	0.35	11,164	31	0.28	11,990	28	0.23
Total average interest earning assets	294,264	8,512	2.89	299,691	8,551	2.85	314,642	9,684	3.08
Total average non-interest earning assets	11,289			11,104			11,144		
Total average assets	305,553	8,512	2.79%	310,795	8,551	2.75%	325,786	9,684	2.97%

	Year ended December 31,		
	2016	2017	2018

	Average Balance(1)	Interest Expense	Average Cost	Average Balance(1)	Interest Expense	Average Cost	Average Balance(1)	Interest Expense	Average Cost
	(in billions of Won, except percentages)								
Liabilities									
Interest-bearing liabilities									
Deposits due to customers									
Demand deposits	9,742	76	0.78%	8,319	52	0.63%	8,512	51	0.60%
Time and savings deposits	181,073	2,166	1.20	186,277	2,008	1.08	196,806	2,418	1.23
Certificates of deposit	3,476	59	1.70	4,553	78	1.71	5,091	104	2.04
Other deposits	23,405	246	1.05	24,444	242	0.99	26,254	344	1.31
Total deposits	217,696	2,547	1.17	223,593	2,380	1.06	236,663	2,917	1.23
Borrowings	20,054	215	1.07	17,669	238	1.35	15,752	307	1.95
Debentures	22,988	619	2.69	25,865	639	2.47	27,613	720	2.61
Other	19,994	111	0.56	19,037	73	0.38	20,146	89	0.44
Total average interest-bearing liabilities	280,732	3,492	1.24	286,164	3,330	1.16	300,174	4,033	1.34
Total average non-interest-bearing liabilities	4,663			3,767			3,896		
Total average liabilities	285,395	3,492	1.22	289,931	3,330	1.15	304,070	4,033	1.33
Total average equity	20,158			20,864			21,716		
Total average liabilities and equity	305,553	3,492	1.14%	310,795	3,330	1.07%	325,786	4,033	1.24%

(1) Average balances are based on daily balances for Woori Bank and on quarterly balances for all of our other subsidiaries and our structured companies.

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(2) Interest income from credit cards is derived from interest on credit card loans and credit card installment purchases.
(3) Not including other financial assets (or other receivables), and prior to deducting allowance for credit losses and present value discount or reflecting deferred origination costs.
(4) Includes automobile lease financing to consumer borrowers.
(5) Includes home equity loans.
(6) Includes financial assets at fair value through profit or loss.
(7) Includes financial assets at fair value through other comprehensive income and securities at amortized cost (or available-for-sale financial assets and held-to-maturity financial assets).

Analysis of Changes in Net Interest Income   Volume and Rate Analysis

The following table provides an analysis of changes in interest income, interest expense and net interest income based on changes in volume and changes in rate for 2017 compared to 2016 and 2018 compared to 2017. Information is provided with respect to: (1) effects attributable to changes in volume (changes in volume multiplied by prior rate) and (2) effects attributable to changes in rate (changes in rate multiplied by prior volume). Changes attributable to the combined impact of changes in rate and volume have been allocated proportionately to the changes due to volume changes and changes due to rate changes.

	2017 vs. 2016 Increase/(decrease) due to changes in			**2018 vs. 2017 Increase/(decrease) due to changes in**		
	Volume	**Rate**	**Total**	**Volume**	**Rate**	**Total**
			(in billions of Won)			
Interest-earning assets						
Due from banks	4	4	8	2	28	30
Loans(1)						
Commercial and industrial	(94)	15	(79)	293	3	296
Trade financing	(16)	43	27	(5)	80	75
Lease financing(2)	1		1	3		3
Other commercial	(14)	4	(10)	46	13	59
General purpose household(3)	154	22	176	21	339	360
Mortgage	75	7	82	27	127	154
Credit cards	41	(37)	4	55	(6)	49
Securities						
Trading(4)	1	(11)	(10)	24	(23)	1
Investment(5)	34	(186)	(152)	(8)	117	109
Other		(8)	(8)	2	(5)	(3)
Total interest income	186	(147)	39	460	673	1,133
Interest-bearing liabilities						
Deposits due to customers						
Demand deposits	(11)	(13)	(24)	1	(2)	(1)
Time and savings deposits	62	(220)	(158)	114	296	410
Certificates of deposit	18	1	19	9	17	26
Other deposits	11	(15)	(4)	18	84	102

Borrowings	(26)	49	23	(26)	95	69
Debentures	77	(57)	20	43	38	81
Other	(5)	(33)	(38)	4	12	16
Total interest expense	126	(288)	(162)	163	540	703
Net interest income	60	141	201	297	133	430

(1) Not including other financial assets (or other receivables) and prior to deducting allowance for credit losses and present value discount or reflecting deferred origination costs.

(2) Includes automobile lease financing to consumer borrowers.

(3) Includes home equity loans.

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(4) Includes financial assets at fair value through profit or loss.
(5) Includes financial assets at fair value through other comprehensive income and securities at amortized cost (or available-for-sale financial assets and held-to-maturity financial assets).

Item 3.B. ***Capitalization and Indebtedness***
Not Applicable

Item 3.C. ***Reasons for the Offer and Use of Proceeds***
Not Applicable

Item 3.D. ***Risk Factors***
Risks relating to our corporate credit portfolio

The largest portion of our exposure is to small- and medium-sized enterprises, and financial difficulties experienced by companies in this segment may result in a deterioration of our asset quality and have an adverse impact on us.

Our loans to small- and medium-sized enterprises amounted to 68,434 billion, or 28.9% of our total loans, as of December 31, 2016, 74,906 billion, or 29.6% of our total loans, as of December 31, 2017 and 79,371 billion, or 30.3 % of our total loans, as of December 31, 2018. As of December 31, 2018, Won-denominated loans to small- and medium-sized enterprises that were classified as substandard or below were 451 billion, representing 0.6% of such loans to those enterprises. See Item 4.B. Business Overview Corporate Banking Small and Medium-Sized Enterprise Banking. We recorded charge-offs of 199 billion in respect of our Won-denominated loans to small- and medium-sized enterprises in 2018, compared to charge-offs of 325 billion in 2017 and 469 billion in 2016. According to data compiled by the Financial Supervisory Service, the industry-wide delinquency ratios for Won-denominated loans to small- and medium-sized enterprises decreased in 2017 but increased in 2018. The delinquency ratio for small- and medium-sized enterprises is calculated as the ratio of (1) the outstanding balance of such loans in respect of which either principal or interest payments are overdue by one month or more to (2) the aggregate outstanding balance of such loans. Our delinquency ratio for such loans denominated in Won was 0.9% as of December 31, 2016, 0.5% as of December 31, 2017 and 0.5% as of December 31, 2018. Our delinquency ratio may increase in 2019 as a result of, among other things, adverse changes in economic conditions in Korea and globally. See Other risks relating to our business Unfavorable changes in the global financial markets could adversely affect our results of operations and financial condition. Accordingly, we may be required to take measures to decrease our exposures to these customers.

In light of the deteriorating financial condition and liquidity position of small- and medium-sized enterprises in Korea as a result of the global financial crisis commencing in the second half of 2008, the Korean government introduced measures intended to encourage Korean banks to provide financial support to small- and medium-sized enterprise borrowers. For example, the Korean government requested Korean banks, including us, to establish a fast track program to provide liquidity assistance to small- and medium-sized enterprises on an expedited basis. Under the fast track program we established, liquidity assistance is provided to small- and medium-sized enterprise borrowers applying for such assistance, in the form of new short term loans or maturity extensions or interest rate adjustments with respect to existing loans, after expedited credit review and approval. The overall prospects for the Korean economy in 2019 and beyond remain uncertain, and the Korean government may extend or renew existing or past policies and initiatives or introduce new policies or initiatives to encourage Korean banks to provide financial support to small- and medium-sized enterprises. We believe that, to date, our participation in such government-led initiatives (primarily through the fast track program) has not caused us to extend a material amount of credit that we would not have otherwise extended nor materially impacted our results of operations and financial condition in general. The aggregate amount of outstanding small- and medium-sized enterprise loans made by us under the fast track program was 91.8 billion as of December 31, 2018, which represented 0.12% of our total small- and medium-sized enterprise loan portfolio as of such date.

Furthermore, loans made by us under the fast track program are partially guaranteed by the Korean government s public financial institutions, including the Korea Credit Guarantee Fund and the Korea Technology Finance Corporation. However, there can be no assurance that our future participation in such government-led initiatives would not lead us to extend credit to small- and medium-sized enterprise borrowers that we would not otherwise extend, or offer terms for such credit that we would not otherwise offer, in the absence of such initiatives. Furthermore, there is no guarantee that the financial condition and liquidity position of our small- and medium-sized enterprise borrowers benefiting from such initiatives will improve sufficiently for them to service their debt on a timely basis, or at all. Accordingly, increases in our exposure to small- and medium-sized enterprises resulting from such government-led initiatives may have a material adverse effect on our results of operations and financial condition.

Many small- and medium-sized enterprises represent sole proprietorships or very small businesses dependent on a relatively limited number of suppliers or customers and tend to be affected by fluctuations in the Korean and global economy to a greater extent than large corporate borrowers. In addition, small- and medium-sized enterprises often maintain less sophisticated financial records than large corporate borrowers. Therefore, it is generally more difficult for us 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 have close 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 we have exposure, also resulting in an impairment of their ability to repay loans.

Financial difficulties experienced by small- and medium-sized enterprises as a result of, among other things, adverse changes in domestic and global economic conditions, as well as aggressive marketing and competition among banks to lend to this segment, may lead to a deterioration in the asset quality of our loans to this segment in the future. Any such deterioration would result in increased charge-offs, higher provisioning and reduced interest and fee income from this segment, which would have an adverse impact on our financial condition and results of operations.

We have exposure to Korean construction, shipbuilding and shipping companies, and financial difficulties of these companies may adversely impact us.

As of December 31, 2018, the total amount of loans provided by us to construction, shipbuilding and shipping companies in Korea amounted to 3,847 billion, 527 billion and 371 billion, or 1.5%, 0.2% and 0.1% of our total loans, respectively. We also have other exposures to Korean construction, shipbuilding and shipping companies, including in the form of guarantees extended for the benefit of such companies and debt and equity securities of such companies held by us. In the case of construction companies, we have potential exposure in the form of guarantees provided to us by general contractors with respect to financing extended by us for residential and commercial real estate development projects, as well as commitments to purchase asset-backed securities secured by the assets of companies in the construction industry and other commitments we enter into relating to project financing for such real estate projects which may effectively function as guarantees. In the case of shipbuilding companies, such exposures include refund guarantees extended by us on behalf of shipbuilding companies to cover their obligation to return a portion of the ship order contract amount to customers in the event of performance delays or defaults under shipbuilding contracts.

Although the construction industry in Korea has shown signs of recovery since 2015, excessive investment in residential property development projects, the recent strengthening of mortgage lending regulations by the Korean government, stagnation of real property prices and reduced demand for residential property in areas outside of Seoul, are expected to continue to negatively impact the construction industry. The shipbuilding industry in Korea has experienced a severe downturn in recent years reflecting a significant decrease in ship orders, primarily due to adverse conditions in the global economy and the resulting slowdown in global trade. In the case of shipping companies in Korea, reduced shipping rates and high chartering costs, together with the slowdown in global trade, have contributed to the deterioration of their financial condition, requiring some of them to file for bankruptcy or pursue voluntary restructuring of their debt.

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In response to the deteriorating financial condition and liquidity position of borrowers in the Korean construction, shipbuilding and shipping industries, which were disproportionately impacted by adverse domestic and global economic developments, the Korean government implemented a program in 2009 to promote expedited restructuring of such borrowers by their Korean creditor financial institutions, under the supervision of major commercial banks. In accordance with such program, 24 construction companies and five shipbuilding companies became subject to workout in 2009, following review by their creditor financial institutions (including us) and the Korean government. Each year since 2009, the Financial Services Commission and the Financial Supervisory Service have announced the results of subsequent credit risk evaluations conducted by creditor financial institutions (including us) of companies in Korea with outstanding debt of 50 billion or more, pursuant to which a number of companies were selected by such financial institutions for restructuring in the form of workout, liquidation or court receivership. Most recently, in 2018, five companies with outstanding debt of 50 billion or more (all of which were shipbuilding companies) were selected by such financial institutions for restructuring. There is no assurance, however, that these measures will be successful in stabilizing the Korean construction, shipbuilding and shipping industries.

The allowance for credit losses that we have established against our credit exposures to Korean construction, shipbuilding and shipping companies may not be sufficient to cover all future losses arising from these and other exposures. If the credit quality of our exposures to such companies declines further, we may incur substantial additional provisions for credit loss, which could adversely impact our results of operations and financial condition. Furthermore, although a portion of our loans to construction, shipbuilding and shipping companies are secured by collateral, such collateral may not be sufficient to cover uncollectible amounts in respect of such loans.

A large portion of our exposure is concentrated in a relatively small number of large corporate borrowers, which increases the risk of our corporate credit portfolio.

As of December 31, 2018, our 20 largest exposures to corporate borrowers (including loans, debt and equity securities, credit-related commitments and other exposures) totaled 49,913 billion, which represented 12.0% of our total exposures. As of that date, our single largest corporate exposure was to the Korea Development Bank, to which we had outstanding credits in the form of debt securities of 9,424 billion and loans in Won of 14 billion, representing 2.3% of our total exposures in the aggregate. Aside from exposure to the Korean government and government-related agencies, our next largest exposure was to Kyobo Securities, to which we had outstanding exposure of 2,543 billion representing 0.6% of our total exposures. Any deterioration in the financial condition of our large corporate borrowers may require us to record substantial additional allowances and may have a material adverse impact on our results of operations and financial condition.

We have exposure to the largest Korean commercial conglomerates, known as chaebols, and, as a result, financial difficulties of chaebols may have an adverse impact on us.

Of our 20 largest corporate exposures as of December 31, 2018, four were to companies that were members of the 24 largest *chaebols* in Korea. As of that date, the total amount of our exposures to the 24 largest *chaebols* was 24,285 billion, or 5.8% of our total exposures. If the credit quality of our exposures to *chaebols* declines as a result of financial difficulties they experience or for other reasons, we could incur additional provisions for credit loss, which would hurt our results of operations and financial condition. See Item 4.B. Business Overview Assets and Liabilities Loan Portfolio Exposure to Chaebols.

The allowances we have established against these exposures may not be sufficient to cover all future losses arising from these exposures. In addition, in the case of companies that are in or in the future enter into workout, restructuring, reorganization or liquidation proceedings, our recoveries from those companies may be limited. We may, therefore, experience future losses with respect to these exposures.

We have exposure to companies that are currently or may in the future be put in restructuring, and we may suffer losses as a result of additional provisions for credit loss required or the adoption of restructuring plans with which we do not agree.

As of December 31, 2018, our credit exposures to companies that were in workout or corporate restructuring amounted to 515 billion or 0.1% of our total credit exposures, of which 433 billion or 84.1% was classified as substandard or below and substantially all of which was classified as impaired. As of the same date, our allowance for credit losses on these credit exposures amounted to 193 billion, or 37.5% of these exposures. These allowances may not be sufficient to cover all future losses arising from our credit exposure to these companies. Furthermore, we have other exposure to such companies in the form of debt and equity securities of such companies held by us (including equity securities we acquired as a result of debt-to-equity conversions). Including such securities, our exposures as of December 31, 2018 to companies in workout or restructuring amounted to 523 billion, or 0.1% of our total exposures. Our exposures to such companies may also increase in the future, including as a result of adverse conditions in the Korean economy. In addition, in the case of borrowers that are or become subject to workout, we may be forced to restructure our credits pursuant to restructuring plans approved by other creditor financial institutions of the borrower, or to dispose of our credits to other creditors on unfavorable terms, which may adversely affect our results of operations and financial condition.

Risks relating to our consumer credit portfolio

We may experience increases in delinquencies in our consumer loan and credit card portfolios.

In recent years, consumer debt has increased rapidly in Korea. Our portfolio of consumer loans amounted to 104,484 billion as of December 31, 2016, 109,290 billion as of December 31, 2017 and 117,096 billion as of December 31, 2018. Our credit card portfolio amounted to 6,674 billion as of December 31, 2016, 6,827 billion as of December 31, 2017 and 8,051 billion as of December 31, 2018. As of December 31, 2018, our consumer loans and credit card receivables represented 44.7% and 3.1% of our total lending, respectively. See Item 4.B. Business Overview Consumer Banking Lending Activities and Item 4.B. Business Overview Credit Cards Products and Services.

The growth in our consumer loan portfolio in recent years, together with adverse changes in economic conditions in Korea and globally, may lead to increasing delinquencies and a deterioration in asset quality. The amount of our consumer loans classified as substandard or below was 305 billion (or 0.3% of our consumer loan portfolio) as of December 31, 2016, 276 billion (or 0.3% of our consumer loan portfolio) as of December 31, 2017 and 309 billion (or 0.3% of our consumer loan portfolio) as of December 31, 2018. We charged off consumer loans amounting to 204 billion in 2018, as compared to 147 billion in 2017 and 155 billion in 2016, and recorded provisions for credit loss in respect of consumer loans of 192 billion in 2018, as compared to 152 billion in 2017 and 77 billion in 2016. Within our consumer loan portfolio, the outstanding balance of general purpose household loans, which, unlike mortgage or home equity loans, are often unsecured and therefore tend to carry a higher credit risk, amounted to 27,113 billion, or 25.9% of our total outstanding consumer loans, as of December 31, 2016, 31,108 billion, or 28.5% of our total outstanding consumer loans, as of December 31, 2017 and 33,486 billion, or 28.6% of our total outstanding consumer loans, as of December 31, 2018.

In our credit card segment, outstanding balances overdue by more than one month amounted to 80 billion, or 1.2% of our credit card receivables, as of December 31, 2016, 88 billion, or 1.3% of our credit card receivables, as of December 31, 2017 and 110 billion, or 1.4% of our credit card receivables, as of December 31, 2018. In line with industry practice, we have restructured a portion of our delinquent credit card account balances as loans. As of December 31, 2018, these restructured loans amounted to 147 billion, or 1.8% of our credit card balances. Because these restructured loans are not initially recorded as being delinquent, our delinquency ratios do not fully reflect all delinquent amounts relating to our credit card balances. Including all restructured loans, outstanding balances overdue by more than one month accounted for 3.1% of our credit card balances as of December 31, 2018. We charged off credit card balances amounting to 243 billion in 2018, as compared to 228 billion in 2017 and 242 billion in 2016, and recorded provisions for credit loss in respect of credit card balances of 213 billion in 2018, as compared to 204 billion in 2017 and 207 billion in 2016. Delinquencies may further increase in the future as a result of, among other things, adverse economic conditions in Korea, additional government regulation or the inability of Korean consumers to manage increased household debt.

A deterioration of the asset quality of our consumer loan and credit card portfolios would require us to record increased provisions for credit loss and charge-offs and adversely affect our financial condition and results of operations. In addition, our large exposure to consumer debt means that we are exposed to changes in economic conditions affecting Korean consumers. Accordingly, economic difficulties in Korea that hurt those consumers could result in further deterioration in the credit quality of our consumer loan and credit card portfolios. For example, a rise in unemployment or an increase in interest rates in Korea could adversely affect the ability of consumers to make payments and increase the likelihood of potential defaults. See Risks relating to Korea Unfavorable financial and economic developments in Korea may have an adverse effect on us.

In addition, we are exposed to changes in regulations and policies on consumer lending by the Korean government, which may adopt measures to restrict consumer lending or encourage financial institutions to provide financial support to certain types of retail borrowers. In 2014 and 2015, the Korean government implemented several measures to encourage consumer spending and revive the housing market in Korea, including loosening regulations on mortgage lending, which contributed to an increase in our portfolio of consumer loans. However, the Korean government introduced various measures from the second half of 2016 to 2018 to tighten regulations on mortgage lending and housing subscription in response to the rapid growth in consumer debt and concerns over speculative investments in real estate in certain areas. A decrease in housing prices as a result of the implementation of such measures, together with the high level of consumer debt and rising interest rate levels, could result in declines in consumer spending and reduced economic growth, which may lead to increases in delinquency levels of our consumer loan and credit card portfolios.

In light of adverse conditions in the Korean economy affecting consumers, in March 2009, the Financial Services Commission requested Korean banks, including us, to establish a pre-workout program, including a credit counseling and recovery service, for retail borrowers with outstanding short-term debt. Under the pre-workout program, which has been in operation since April 2009, maturity extensions and/or interest reductions are provided to retail borrowers with total loans of less than 1.5 billion (consisting of no more than 500 million of unsecured loans and 1 billion of secured loans) who are in arrears on their payments for more than 30 days but less than 90 days or for retail borrowers with an annual income of 40 million or less who have been in arrears on their payments for 30 days or more on an aggregate basis for the 12 months prior to their application, among others. The aggregate amount of consumer credit (including credit card receivables) we provided which became subject to the pre-workout program in 2018 was 37 billion. While we believe that our operation of the pre-workout program has not had a material impact on the overall credit quality of our consumer loan and credit card portfolios to date, our participation in such government-led initiatives to provide financial support to retail borrowers may lead us to offer credit terms for such borrowers that we would not otherwise offer in the absence of such initiatives, which may have an adverse effect on our results of operations and financial condition.

A decline in the value of the collateral securing our consumer loans and our inability to realize full collateral value may adversely affect our consumer credit portfolio.

A substantial portion of our consumer loans is secured by real estate, the values of which have fluctuated significantly in recent years. Although it is our general policy to lend up to 70% of the appraised value of collateral (except in areas of high speculation designated by the government where we generally limit our lending to 40% of the appraised value of collateral) and to periodically re-appraise our collateral, a downturn in the real estate markets in Korea may result in a decline in the value of the collateral securing our mortgage and home equity loans. If collateral values decline in the future, they may not be sufficient to cover uncollectible amounts in respect of our secured loans. Any declines in the value of the real estate or other collateral securing our consumer loans, or our inability to obtain additional collateral in the event of such declines, could result in a deterioration in our asset quality and may require us to record additional allowances for credit losses.

In Korea, foreclosure on collateral generally requires a written petition to a court. An application, when made, may be subject to delays and administrative requirements that may decrease the value of such collateral. We cannot guarantee that we will be able to realize the full value on our collateral as a result of, among other factors, delays in foreclosure proceedings and defects in the perfection of our security interest in collateral. Our failure to recover the expected value of collateral could expose us to potential losses.

Risks relating to our financial holding company structure and strategy

We may not succeed in implementing our strategy to take advantage of, or fail to realize the anticipated benefits of, our financial holding company structure.

We were established as a new financial holding company in January 2019 pursuant to a comprehensive stock transfer under Korean law, following the completion of which Woori Bank, Woori FIS Co., Ltd., Woori Finance Research Institute Co., Ltd., Woori Credit Information Co., Ltd., Woori Fund Services Co., Ltd. and Woori Private Equity Asset Management Co., Ltd. became our wholly-owned subsidiaries. See Item 4A. History and Development of the Company Establishment of Woori Financial Group.

One of our principal strategies is to take advantage of our financial holding company structure to become a comprehensive financial services provider capable of developing and cross-selling a diverse range of products and services to our large existing base of retail and corporate banking customers. An intended benefit of our financial holding company structure is that it enhances our ability to engage in mergers and acquisitions which we may decide to pursue as part of our strategy. Accordingly, we may consider acquiring or merging with other financial institutions, particularly in the non-banking sector, to achieve more balanced growth and further diversify our revenue base. We may also continue to seek opportunities to expand our operations in markets outside Korea. See Item 4.B. Business Overview Strategy and We may not be able to successfully execute our overseas expansion strategy.

The integration of companies we may acquire or merge with in the future under our financial holding company structure could require a significant amount of time, financial resources and management attention. Moreover, that process could place a burden on our operations (including our risk management operations) or information technology systems, reduce employee morale, produce unintended inconsistencies in our standards, controls, procedures or policies, and affect our relationships with customers and our ability to retain key personnel. The realization of the anticipated benefits of our financial holding company structure may be blocked, delayed or reduced as a result of many factors, some of which may be outside our control. These factors include:

- competition from other financial institutions, as well as private equity firms and other potential acquirers, in Korea and elsewhere in terms of identifying and winning bids for attractive merger and acquisition targets in the financial industry, including the non-banking sector, which may make it challenging for us to successfully acquire, or which may require us to pay a high acquisition price for, such targets;

- difficulties in integrating the diverse activities and operations of our subsidiaries or any companies we may acquire, including risk management operations and information technology systems, personnel, policies and procedures;

difficulties in reorganizing or reducing overlapping personnel, branches, networks and administrative functions;

restrictions under the Financial Holding Company Act and other regulations on transactions between a financial holding company and, or among, its subsidiaries;

failure to leverage our financial holding company structure to realize operational efficiencies and to cross-sell multiple products and services;

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unforeseen contingent risks, including lack of required capital resources, increased tax liabilities or restrictions in our overseas operations, relating to our financial holding company structure;

unexpected business disruptions;

failure to attract, develop and retain personnel with necessary expertise;

loss of customers; and

labor unrest.

Accordingly, we may not be able to realize the anticipated benefits of our financial holding company structure, and our business, results of operations and financial condition may suffer as a result.

We depend on limited forms of funding to fund our operations at the holding company level.

We are a financial holding company with no significant assets other than the shares of our subsidiaries. Our primary sources of funding and liquidity are dividends from our subsidiaries, sales of interests in our subsidiaries and direct borrowings and issuances of equity or debt securities at the holding company level. In addition, as a financial holding company, we are required to meet certain minimum financial ratios under Korean law, including with respect to liquidity and capital adequacy. Our ability to meet our obligations to our direct creditors and employees and our other liquidity needs and regulatory requirements at the holding company level depends on timely and adequate distributions from our subsidiaries and our ability to sell our securities or obtain credit from our lenders.

The ability of our subsidiaries to pay dividends to us depends on their financial condition and operating results. In the future, our subsidiaries may enter into agreements, such as credit agreements with lenders or indentures relating to high-yield or subordinated debt instruments, that impose restrictions on their ability to make distributions to us, and the terms of future obligations and the operation of Korean law could prevent our subsidiaries from making sufficient distributions to us to allow us to make payments on our outstanding obligations. See As a financial holding company, we largely depend on receiving dividends from our subsidiaries to pay dividends on our common stock. Any delay in receipt of or shortfall in payments to us from our subsidiaries could result in our inability to meet our liquidity needs and regulatory requirements, including minimum liquidity and capital adequacy ratios, which may disrupt our operations at the holding company level.

In addition, our creditors will generally not be able to assert claims on the assets of our subsidiaries. Furthermore, our inability to sell our securities or obtain funds from our lenders on favorable terms, or at all, could also result in our inability to meet our liquidity needs and regulatory requirements and may disrupt our operations at the holding company level.

As a financial holding company, we largely depend on receiving dividends from our subsidiaries to pay dividends on our common stock.

Since our principal assets at the holding company level are the shares of our subsidiaries, our ability to pay dividends on our common stock largely depends on dividend payments from those subsidiaries. Those dividend payments are subject to the Korean Commercial Code, the Bank Act and regulatory limitations, generally based on capital levels and retained earnings, imposed by the various regulatory agencies with authority over those entities. The ability of our subsidiaries to pay dividends may be subject to regulatory restrictions to the extent that paying dividends would impair their respective non-consolidated profitability, financial condition or other cash flow needs. For example:

- under the Korean Commercial Code, dividends may only be paid out of distributable income, an amount which is calculated by subtracting the aggregate amount of a company s paid-in capital and certain mandatory legal reserves from its net assets, in each case as of the end of the prior annual period;

- under the Bank Act, a bank also must credit at least 10% of its net profit to a legal reserve each time it pays dividends on distributable income until that reserve equals the amount of its total paid-in capital; and under the Bank Act and the requirements of the Financial Services Commission, if a bank fails to meet its required capital adequacy ratio or otherwise becomes subject to management improvement measures imposed by the Financial Services Commission, then the Financial Services Commission may restrict the declaration and payment of dividends by that bank.

Our subsidiaries may not continue to meet the applicable legal and regulatory requirements for the payment of dividends in the future. If they fail to do so, they may stop paying or reduce the amount of the dividends they pay to us, which would have an adverse effect on our ability to pay dividends on our common stock.

The implementation of the Korean government s privatization plan may have an adverse effect on us and your interests as a shareholder.

In June 2013, the Korean government, through the Public Funds Oversight Committee of the Financial Services Commission, announced an updated plan to privatize Woori Finance Holdings, Woori Bank s former parent company, and its former subsidiaries. The privatization plan provided for the segregation of such entities into three groups and the disposal of the Korean government s interest in these entities held through the KDIC in a series of transactions, many of which have been completed. Such transactions included the following:

Kwangju Bank and Kyongnam Bank. In May 2014, Woori Finance Holdings established KJB Financial Group and KNB Financial Group through a spin-off of its businesses related to the holding of the shares and thereby controlling the business operations of Kwangju Bank and Kyongnam Bank, respectively. As a result of such spin-off, KJB Financial Group became the owner of the shares of Kwangju Bank previously held by Woori Finance Holdings and KNB Financial Group became the owner of the shares of Kyongnam Bank previously held by Woori Finance Holdings. Woori Finance Holdings no longer owned any shares of Kwangju Bank or Kyongnam Bank, and neither they nor their new holding companies were its subsidiaries, after the spin-off. Following such spin-off, each of these banks was merged with its holding company, and in October 2014, the KDIC sold its 56.97% ownership interest in Kwangju Bank and Kyongnam Bank to JB Financial Group and BS Financial Group, respectively.

Woori Investment & Securities and Other Subsidiaries. In March 2014, Woori Finance Holdings sold its 52.0% ownership interest in Woori Financial to KB Financial Group. In May 2014, Woori Finance Holdings sold its 100.0% ownership interest in Woori Asset Management to Kiwoom Securities and sold its 100.0% ownership interest in Woori F&I to Daishin Securities. In June 2014, Woori Finance Holdings sold its 37.9% ownership interest in Woori Investment & Securities, its 51.6% ownership interest in Woori Aviva Life Insurance and its 100.0% ownership interest in Woori FG Savings Bank to NongHyup Financial Group in a collective sale. As a result of such sales, Woori Investment & Securities, Woori Asset Management, Woori Aviva Life Insurance, Woori FG Savings Bank, Woori F&I and Woori Financial were no longer subsidiaries of Woori Finance Holdings, and it no longer owned any shares in such former subsidiaries.

Woori Bank. In November 2014, Woori Finance Holdings merged with and into Woori Bank. As a result of the merger, the other former subsidiaries of Woori Finance Holdings, including Woori Card, Woori Private Equity, Woori FIS, Woori Investment Bank and Woori Finance Research Institute, became Woori Bank s subsidiaries. In December 2014, the KDIC sold 40,143,022 shares of Woori Bank s common stock (representing 5.9% of its outstanding common stock) in a private sale in Korea. In addition, in December 2016 and January 2017, the KDIC sold an aggregate of 200,685,395 shares of Woori Bank s common stock (representing 29.7% of its outstanding common stock) in stakes ranging from 3.7% to 6.0% to seven financial companies through a bidding process. Pursuant to a commitment made by the KDIC in connection with such bidding process, five persons, each nominated by one of the winning bidders, were elected as new outside directors at an extraordinary general meeting of Woori Bank s shareholders held in December 2016. In December 2018, five persons, each nominated by one of such winning bidders, were elected at an extraordinary general meeting of Woori Bank s shareholders to serve as our outside directors upon our establishment. See Item 6.A. Directors and Senior Management Board of Directors Outside Directors. In 2017, pursuant to a series of transactions related to call options previously granted in connection with the KDIC s sale of Woori Bank s common stock in December 2014, the KDIC sold an aggregate of 19,852,364 shares of Woori Bank s common stock (representing 2.94% of its outstanding common stock). As a result of such transactions, the KDIC s ownership interest in Woori Bank was reduced to 18.43%.

See Item 4.A. History and Development of the Company Privatization Plan. In connection with our establishment in January 2019 as a new financial holding company pursuant to a comprehensive stock transfer under Korean law, the KDIC received our common stock in exchange for the common stock of Woori Bank it owned, as a result of which the KDIC currently owns 18.32% of our outstanding common stock. We expect that the KDIC will sell all or a portion of such common stock to one or more purchasers in the future.

The implementation of the Korean government s privatization plan, including the expected sale of the KDIC s remaining ownership interest in us to third parties, is likely to have a significant impact on us. For example, the KDIC s sale of its ownership interest in us to a small number of third parties may affect our business, management, strategy, capital structure and assets and liabilities and lead to diversion of management attention, a loss of customers and labor unrest. There is also no guarantee that such sale will not result in unintended adverse tax consequences for us and our subsidiaries, as well as our shareholders. See Risks relating to our common stock and ADSs Future sales by the KDIC of the shares of our common stock it owns may result in adverse Korean tax consequences for you. Accordingly, the implementation of the privatization plan may have a material adverse effect on the trading price of our common stock and American depositary shares, or ADSs, and your interests as a shareholder.

We may not be able to successfully execute our overseas expansion strategy.

As part of our business strategy, we have been seeking opportunities to expand our operations in markets outside Korea, including through the opening of additional overseas branches and offices as well as strategic acquisitions and investments, particularly in South and Southeast Asia. For example, in October 2016, we acquired a 51% equity interest in Wealth Development Bank Corp., a thrift bank in the Philippines. In November 2016, we established a local subsidiary in Vietnam, Woori Bank Vietnam, which commenced operations in January 2017 and currently operates branches in major cities including Hanoi, Bac Ninh, Ho Chi Minh City and Haiphong. In July 2017, we expanded our network of branches to India, where we established branches in Gurgaon and Mumbai. In June 2018, we acquired VisionFund (Cambodia) Ltd., a microfinance lender in Cambodia, which was renamed WB Finance Co., Ltd. Notwithstanding the foregoing, the expansion of our operations abroad may be difficult due to the presence of established competitors in the relevant local markets. In addition, overseas expansion and the management of international operations may require significant financial expenditures as well as management attention, and will subject us to the challenges of operating in an unfamiliar business environment with different regulatory, legal and taxation systems and political, economic and social risks. Accordingly, there is no guarantee that we will be successful in executing our overseas expansion strategy. The failure of our overseas expansion strategy could have an adverse impact on our business, results of operations and financial condition.

We may not generate sufficient additional fees to achieve our revenue diversification strategy.

An important element of our overall strategy is increasing our fee income in order to diversify our revenue base, in anticipation of greater competition and declining lending margins. Historically, our primary source of revenues has been net interest income from our banking operations at Woori Bank. To date, except for credit card, trust management, bancassurance and currency transfer fees (including foreign exchange-related commissions), and fees collected in connection with the operation of our investment funds and investment banking activities, we have not generated substantial fee income. We intend to develop new sources of fee income as part of our business strategy, including through our current investment banking and asset management businesses and mergers and acquisitions which we may decide to pursue through our financial holding company structure. See Item 4.B. Business

Overview Strategy. Although we, like many other Korean financial institutions, have begun to charge fees to our customers more regularly, customers may prove unwilling to pay additional fees, even in exchange for more attractive value-added services, and their reluctance to do so would adversely affect the implementation of our strategy to increase our fee income. Furthermore, the fees that we charge to customers are subject to regulation by Korean financial regulatory authorities, which may seek to implement regulations or measures that may have an adverse impact on our ability to achieve this aspect of our strategy.

Risks relating to competition

Competition in the Korean financial industry is intense, and we may lose market share and experience declining margins as a result.

Competition in the Korean financial market has been and is likely to remain intense. Some of the financial institutions that we compete with are larger in terms of asset size and customer base and have longer operating histories as financial holding companies, greater financial resources or more specialized capabilities than us and our subsidiaries. In addition, in the area of our core banking operations, most Korean banks have been focusing on retail customers and small- and medium-sized enterprises in recent years, although they have begun to generally increase their exposure to large corporate borrowers, and have been focusing on developing fee income businesses, including bancassurance and investment products, as increasingly important sources of revenue. In the area of credit cards, Korean banks and credit card companies have in the past engaged in aggressive marketing activities and made significant investments, contributing to some extent to lower profitability and asset quality problems previously experienced with respect to credit card receivables. The competition and market saturation resulting from this common focus may make it more difficult for us to secure retail, small- and medium-sized enterprise and large corporate customers with the credit quality and on credit terms necessary to maintain or increase our income and profitability.

In addition, general regulatory reforms in the Korean financial industry have increased competition among banks and other financial institutions in Korea. In the second half of 2015, the Korean government implemented measures to facilitate bank account portability of retail customers by requiring commercial banks to establish systems that allow retail customers to easily switch their bank accounts at one commercial bank to another and automatically transfer the automatic payment settings of their former accounts to the new ones. Such measures are expected to further intensify competition among financial institutions in Korea. Moreover, in March 2016, the Financial Services Commission introduced an individual savings account scheme in Korea, which enables individuals to efficiently manage a wide range of retail investment vehicles, including cash deposits, investment funds and securities investment products, from a single integrated account with one financial institution and offers tax benefits on investment returns. Since the scheme backed by the Korean government allows only one individual savings account per person, financial institutions have been competing to retain existing customers and attract new customers since the launch of the individual savings account scheme. Over 30 financial institutions, including banks, securities companies and insurance companies, have registered with the Financial Services Commission to sell their individual savings account products, and competition among these financial institutions is expected to remain intense.

Furthermore, the introduction of Internet-only banks in Korea is expected to increase competition in the Korean banking industry. Internet-only banks generally operate without branches and conduct most of their operations through electronic means, which enable them to minimize costs and offer customers higher interest rates on deposits or lower lending rates. In April 2017, K bank, the first Internet-only bank in Korea, in which we own 13.8% of the equity with voting rights, commenced operations. Kakao Bank, a mobile-only bank, commenced operations in July 2017.

Moreover, a number of significant mergers and acquisitions in the financial industry have taken place in Korea in recent years, including Hana Financial Group s acquisition of a controlling interest in Korea Exchange Bank in 2012, the subsequent merger of Hana Bank into Korea Exchange Bank in 2015, KB Financial Group s acquisition of Hyundai Securities Co., Ltd. in 2016 and the subsequent merger of Hyundai Securities with and into KB Investment &

Securities Co., Ltd. in 2016. In 2016, Mirae Asset Securities Co., Ltd. acquired a 43% interest in KDB Daewoo Securities Co., Ltd., which subsequently merged with and into Mirae Asset Securities to create Mirae Asset Daewoo Securities Co., Ltd., the largest securities company in Korea in terms of capital.

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Furthermore, in 2014, pursuant to the implementation of the Korean government s privatization plan with respect to Woori Finance Holdings 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 KDIC s ownership interest in Kwangju Bank and Kyongnam Bank were acquired by JB Financial Group and BS Financial Group, respectively. See Item 4.A. History and Development of the Company Privatization Plan.

We expect that consolidation in the Korean 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 significantly greater competition for us. We also believe that foreign financial institutions, many of which have greater experience and resources than we do, may seek to compete with us in providing financial products and services either by themselves or in partnership with existing Korean financial institutions. Increased competition and continuing consolidation may lead to decreased margins, resulting in a material adverse impact on our future profitability. Accordingly, our results of operations and financial condition may suffer as a result of increasing competition in the Korean financial industry.

Competition for customer deposits may increase, resulting in a loss of our deposit customers or an increase in our funding costs.

In recent years, we have faced increasing pricing pressure on deposit products from our competitors. If we do not continue to offer competitive interest rates to our deposit customers, we may lose their business. In addition, even if we are able to match our competitors pricing, doing so may result in an increase in our funding costs, which may have an adverse impact on our results of operations.

Other risks relating to our business

Unfavorable changes in the global financial markets could adversely affect our results of operations and financial condition.

The overall prospects for the Korean and global economy in 2019 and beyond remain uncertain. In recent years, the global financial markets have experienced significant volatility as a result of, among other things:

- a deterioration in economic and trade relations between the United States and its major trading partners, including China;
- uncertainty regarding the timing and method of the United Kingdom s exit from the European Union, or Brexit;
- financial and social difficulties affecting many countries worldwide, in particular in Latin America and Europe;
- the slowdown of economic growth in China and other major emerging market economies;

interest rate fluctuations as well as the possibility of further increases in policy rates by the U.S. Federal Reserve and other central banks; and

political and social instability in various countries in the Middle East, including Syria, Iraq and Egypt.

In light of the high level of interdependence of the global economy, unfavorable changes in the global financial markets, including as a result of any of the foregoing developments, could have a material adverse effect on the Korean economy and financial markets, and in turn on our business, financial condition and results of operations.

We are also exposed to adverse changes and volatility in the global and Korean financial markets as a result of our liabilities and assets denominated in foreign currencies and our holdings of trading and investment securities, including structured products. The value of the Won relative to major foreign currencies in general and the U.S. dollar in particular has fluctuated widely in recent years. A depreciation of the Won will increase our cost of servicing our foreign currency-denominated debt, while continued exchange rate volatility may also result in foreign exchange losses for us. Furthermore, as a result of changing global and Korean economic conditions, there has been volatility in securities prices, including the stock prices of Korean and foreign companies in which we hold an interest. Such volatility has resulted in and may lead to further trading and valuation losses on our trading and investment securities portfolio as well as impairment losses on our investments in joint ventures and associates.

Our risk management system may not be effective in mitigating risk and loss.

We seek to monitor and manage our risk exposure through a standardized risk management system, encompassing a multi-tiered risk management governance structure under our Board Risk Management Committee, our centralized credit risk management system called the CREPIA system, reporting and monitoring systems, early warning systems and other risk management infrastructure, using a variety of risk management strategies and techniques. See Item 11. Quantitative and Qualitative Disclosures about Market Risk. However, such risk management strategies and techniques employed by us and the judgments that accompany their application cannot anticipate the economic and financial outcome in all market environments, and many of our risk management strategies and techniques have a basis in historic market behavior that may limit the effectiveness of such strategies and techniques in times of significant market stress or other unforeseen circumstances. Furthermore, our risk management strategies may not be effective in a difficult or less liquid market environment, as other market participants may be attempting to use the same or similar strategies as us to deal with such market conditions. In such circumstances, it may be difficult for us to reduce our risk positions due to the activity of such other market participants.

We have provided certain assets as collateral in connection with our secured borrowings and could be required to make payments and realize losses in the future relating to those assets.

We have provided certain assets as collateral for our secured borrowings in recent years. As of December 31, 2018, the aggregate amount of assets we had provided as collateral for our secured borrowings was 9,340 billion. These secured borrowings may take the form of asset securitization transactions, where we nominally sell our assets to a securitization vehicle that issues securities backed by those assets, although the assets remain on our statements of financial position. These secured borrowings are intended to be fully repaid through recoveries on collateral. Some of these nominal asset sales were with recourse, which means that if delinquencies arise with respect to such assets, we will be required to either repay a proportionate amount of the related secured borrowing (by reversing the nominal sale and repurchasing such assets) or compensate the securitization vehicle for any net shortfalls in its recoveries on such assets. If we are required to make payments on such assets, or to repay our secured borrowings on those assets and are unable to make sufficient recoveries on them, we may realize further losses on these assets.

An increase in interest rates would decrease the value of our debt securities portfolio and raise our funding costs while reducing loan demand and the repayment ability of our borrowers, which could adversely affect us.

Interest rates in Korea have been subject to significant fluctuations in the past. The Bank of Korea reduced its policy rate to 2.00% through a series of reductions from 2012 to 2014 to support Korea s economy in light of the slowdown in Korea s growth and uncertain global economic prospects. The Bank of Korea further reduced its policy rate to 1.50% in 2015 and again to an unprecedented 1.25% in June 2016 amid deflationary concerns and interest rate cuts by central banks around the world. However, the Bank of Korea increased its policy rate to 1.50% in November 2017 and 1.75% in November 2018 in light of improved growth prospects in Korea and rising interest rate levels globally. All else being equal, further increases in interest rates in the future could lead to a decline in the value of our portfolio of debt securities, which generally pay interest based on a fixed rate. A sustained increase in interest rates will also raise our funding costs, while reducing loan demand, especially among consumers. Rising interest rates may therefore require us to re-balance our asset portfolio and our liabilities in order to minimize the risk of potential mismatches and maintain our profitability. See Item 11.

Quantitative and Qualitative Disclosures about Market Risk. In addition, rising interest rate levels may adversely affect the Korean economy and the financial condition of our corporate and consumer borrowers, including holders of our credit cards, which in turn may lead to a deterioration in our credit portfolio. In particular, since most of our consumer and corporate loans bear interest at rates that adjust periodically based on prevailing market rates, a sustained increase in interest rates would increase the interest costs of our consumer and corporate borrowers and will adversely affect their ability to make payments on their outstanding loans.

Our funding is highly dependent on short-term deposits, which dependence may adversely affect our operations.

We meet a significant amount of our funding requirements through short-term funding sources, which consist primarily of customer deposits. As of December 31, 2018, approximately 96.4% of these deposits had maturities of one year or less or were payable on demand. In the past, a substantial proportion of these customer deposits have been rolled over upon maturity. We cannot guarantee, however, that depositors will continue to roll over their deposits in the future. In the event that a substantial number of these short-term deposit customers withdraw their funds or fail to roll over their deposits as higher-yielding investment opportunities emerge, our liquidity position could be adversely affected. We may also be required to seek more expensive sources of short-term and long-term funding to finance our operations. See Item 5.B. Liquidity and Capital Resources Financial Condition Liquidity.

Labor union unrest may disrupt our operations and hinder our ability to continue to reorganize our operations.

Most financial institutions in Korea have experienced periods of labor unrest. In recent years, we have transferred or merged some of the business operations of our subsidiaries and affiliates into one or more entities and implemented other forms of corporate and operational restructuring, including in connection with the Korean government s privatization plan with respect to Woori Finance Holdings and its former subsidiaries. See Risks relating to our structure and strategy The implementation of the Korean government s privatization plan may have an adverse effect on us and your interests as a shareholder. We may also decide to implement other organizational or operational changes, as well as acquisitions or dispositions, in the future. Such efforts have in the past been met with significant opposition from labor unions in Korea. Actual or threatened labor disputes may in the future disrupt the reorganization process and our business operations, which in turn may hurt our financial condition and results of operations.

The secondary market for corporate bonds in Korea is not fully developed, and, as a result, we may not be able to realize the full marked-to-market value of debt securities we hold when we sell any of those securities.

As of December 31, 2018, we held debt securities issued by Korean companies and financial institutions (other than those issued by government-owned or -controlled enterprises or financial institutions, which include the Bank of Korea, the Korea Development Bank, the Korea Housing Finance Corporation and the Industrial Bank of Korea, among others) with a total book value of 3,263 billion in our trading and investment securities portfolio. The market value of these securities could decline significantly due to various factors, including future increases in interest rates or a deterioration in the financial and economic condition of any particular issuer or of Korea in general. Any of these factors individually or a combination of these factors would require us to write down the fair value of these debt securities, resulting in impairment losses. Because the secondary market for corporate bonds in Korea is not fully developed, the market value of many of these securities as reflected on our consolidated statements of financial position is determined by references to suggested prices posted by Korean rating agencies, which measure prices based on observable market data. These valuations, however, may differ significantly from the actual value that we could realize in the event we elect to sell these securities. As a result, we may not be able to realize the full marked-to-market value at the time of any such sale of these securities and thus may incur additional losses.

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We may be required to raise additional capital if our capital adequacy ratios deteriorate or the applicable capital requirements change in the future, but we may not be able to do so on favorable terms or at all.

Under the capital adequacy requirements of the Financial Services Commission, as of December 31, 2018, we as a bank holding company (had we been in existence) would have been required, and Woori Bank as a bank was required, to maintain a total minimum Tier I common equity capital adequacy ratio of 7.125%, Tier I capital adequacy ratio of 8.625% and combined Tier I and Tier II capital adequacy ratio of 10.625%, on a consolidated basis (including applicable additional capital buffers and requirements as described below). As of December 31, 2018, Woori Bank s Tier I common equity capital, Tier I capital and combined Tier I and Tier II capital adequacy ratios were 11.15%, 13.18% and 15.65%, respectively, which exceeded the minimum levels required by the Financial Services Commission. However, our capital base and capital adequacy ratios may deteriorate in the future if our results of operations or financial condition deteriorates for any reason, or if we are not able to deploy our funding into suitably low-risk assets.

The current capital adequacy requirements of the Financial Services Commission are derived from a new set of bank capital measures, referred to as Basel III, which the Basel Committee on Banking Supervision initially introduced in 2009 and began phasing in starting from 2013. Commencing in July 2013, the Financial Services Commission promulgated a series of amended regulations implementing Basel III, pursuant to which Korean banks and bank holding companies were required to maintain a minimum ratio of Tier I common equity capital (which principally includes equity capital, capital surplus and retained earnings) to risk-weighted assets of 3.5% and Tier I capital to risk-weighted assets of 4.5% from December 1, 2013, which minimum ratios were increased to 4.0% and 5.5%, respectively, from January 1, 2014 and increased further to 4.5% and 6.0%, respectively, from January 1, 2015. Such requirements are in addition to the pre-existing requirement for a minimum ratio of Tier I and Tier II capital (less any capital deductions) to risk-weighted assets of 8.0%, which remains unchanged. The amended regulations also require an additional capital conservation buffer of 1.875% in 2018 and 2.5% in 2019, as well as a potential counter-cyclical capital buffer of up to 2.5%, which is determined on a quarterly basis by the Financial Services Commission. Furthermore, Woori Bank was designated as one of six domestic systemically important banks for 2018 by the Financial Services Commission and was subject to an additional capital requirement of 0.75% in 2018. In June 2018, Woori Bank was again designated as a domestic systemically important bank for 2019, which subjects Woori Bank to an additional capital requirement of 1.0% in 2019. The implementation of Basel III in Korea may have a significant effect on the capital requirements of Korean financial institutions, including us. See Item 4.B. Business Overview Supervision and Regulation Principal Regulations Applicable to Financial Holding Companies Capital Adequacy and Item 4.B. Business Overview Supervision and Regulation Principal Regulations Applicable to Banks Capital Adequacy.

In measuring risk-weighted assets for the purpose of calculating capital adequacy ratios, generally the standardized approach or the internal ratings-based approach is applied; however, for the application of the internal ratings-based approach, which relies on the internal rating system of the relevant bank or banking holding company, the bank or bank holding company must receive approval from the Financial Supervisory Service after a trial evaluation period of one year. Currently, we, as a newly established bank holding company, are required to apply the standardized approach to measure our risk-weighted assets for a trial evaluation period, and, as a result, our capital adequacy ratios may decline in part, compared to those of Woori Bank. We expect to begin to applying the internal ratings-based approach in the first half of 2020.

We may be required to obtain additional capital in the future in order to remain in compliance with the applicable capital adequacy and other regulatory requirements. However, we may not be able to obtain additional capital on favorable terms, or at all. Our ability to obtain additional capital at any time may be constrained to the extent that banks, bank holding companies or other financial institutions in Korea or from other countries are seeking to raise capital at the same time. To the extent that we fail to comply with applicable capital adequacy or other regulatory requirements in the future, Korean regulatory authorities may impose penalties on us ranging from a warning to suspension or revocation of our banking license.

We engage in limited activities relating to Iran and may become subject to sanctions under relevant laws and regulations of the United States and other jurisdictions as a result of such activities, which may adversely affect our business and reputation.

The U.S. Department of the Treasury s Office of Foreign Assets Control, or OFAC, administers and enforces certain laws and regulations (which we refer to as OFAC sanctions) that impose restrictions upon activities or transactions within U.S. jurisdiction with certain countries, governments, entities and individuals that are the subject of OFAC sanctions, including Iran. Non-U.S. persons generally are not automatically bound by OFAC sanctions, but to the extent they engage in transactions completed in part in the United States or through U.S. persons (such as, for example, wiring an international payment that clears through a bank branch in New York), they are required to comply with U.S. sanctions. 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, including with respect to targeted entities in Iran. The United Nations Security Council and other governmental entities (including Korea) also impose similar sanctions.

The United States also maintains indirect sanctions, which we refer to collectively as U.S. secondary sanctions, which provide authority for the imposition of U.S. sanctions on foreign parties that engage in targeted transactions with no connection to U.S. jurisdiction. Secondary sanctions are maintained under, among others, the Iran Sanctions Act, the Comprehensive Iran Sanctions, Accountability and Divestment Act of 2010, or CISADA, the National Defense Authorization Act for Fiscal Year 2012, or the NDAA, the Iran Threat Reduction and Syria Human Rights Act of 2012, or ITRA, various Executive Orders, and the Iran Freedom and Counter-Proliferation Act of 2012, or IFCA. Secondary sanctions have been of increasing importance in recent years, particularly (but not only) with respect to Russia and Iran. Iran has also been designated as a jurisdiction of primary money laundering concern under Section 311 of the USA PATRIOT Act, potentially subjecting banks dealing with Iranian financial institutions to increased regulatory scrutiny.

The 2015 Joint Comprehensive Plan of Action, or the JCPOA, between the five permanent United Nations Security Council members, Germany, and Iran, provided significant sanctions relief to Iran by lifting the majority of European Union and United Nations sanctions, as well as many U.S. secondary sanctions (including those focused on the energy and banking sectors generally). However, on May 8, 2018, U.S. President Donald Trump issued National Security Presidential Memorandum 11, and on August 6, 2018, he issued Executive Order 13846. Together, these documents set forth a plan to terminate the United States participation in the JCPOA and re-imposed, following wind-down periods, certain of the U.S. secondary sanctions that had been lifted to implement the JCPOA. An initial set of secondary sanctions against the Iranian energy sector were re-imposed on August 7, 2018 and a second set of secondary sanctions against Iran became effective on November 5, 2018. Although these changes are not retroactive, they affect transactions executed following the applicable wind-down periods. Accordingly, U.S. secondary sanctions have effectively returned to the status quo prior to the JCPOA, including, but not limited to, secondary sanctions targeting financial and banking transactions with Iranian banks and financial institutions (including the Central Bank of Iran, or the CBI), the Iranian energy sector (including significant transactions for the purchase of petrochemical products from Iran), and transactions with an expanded list of Iranian specially designated nationals.

Violations of OFAC sanctions via transactions with a U.S. jurisdictional nexus can result in substantial civil or criminal penalties. U.S. secondary sanctions apply even when no such jurisdictional nexus exists, and companies that engage in targeted activities under secondary sanctions may themselves become the target of OFAC sanctions, including, among other things, the blocking of any property subject to U.S. jurisdiction in which the sanctioned company has an interest, which would include a prohibition on transactions or dealings within U.S. jurisdiction involving securities of the sanctioned company. Financial institutions engaging in targeted activity could in some instances be sanctioned by termination or restriction of their ability to maintain correspondent accounts in the United States. The imposition of sanctions against foreign financial institutions pursuant to U.S. secondary sanctions is not automatic, requiring further action by the U.S. administration.

Prior to the JCPOA, Korea had benefited from a significant reduction exception, or SRE, that exempted Korean companies from many U.S. secondary sanctions in connection with purchases of crude oil and natural gas

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from Iran that met a series of conditions, including stringent limits on the use of proceeds of oil and gas purchases. Although Korean companies were again eligible for the SRE immediately following the United States withdrawal from the JCPOA, the U.S. Department of State announced that as of May 2, 2019, it would discontinue the exemption.

In 2018, we engaged in the following activities relating to Iran:

We have operated certain accounts for the CBI, which were opened by the CBI pursuant to a service agreement entered into by us and the CBI in September 2010, as amended from time to time, to facilitate trade between Korea and Iran. The accounts opened by the CBI consist of Won-denominated accounts that are used for the settlement of exports of goods produced or substantially transformed in Korea to Iran by Korean exporters and Won, U.S. dollar, euro and Japanese Yen-denominated accounts (of which only the Won accounts are in use) that are used for the settlement of imports of crude oil and natural gas from Iran by Korean importers. By the terms of the service agreement between us and the CBI, settlement of export and import transaction payments due from Iranian entities to Korean exporters or from Korean importers of oil and gas to Iranian entities through such accounts opened by the CBI is effected by crediting or debiting the relevant amount to or from the applicable accounts while a corresponding payment of funds is made to or from an Iranian bank by the CBI. Any funds deposited for the account of Iranian entities as a result of Korean imports of crude oil and natural gas may only be used by transferring them to the Won-denominated account and then making payment to accounts of Korean persons and entities opened at financial institutions in Korea in respect of Korean exports to Iran. No transfers of funds may be made from these accounts to Iran, to Iranian accounts in any third country, or for any use other than those described above. In 2018, the total fee revenue from maintaining the CBI accounts amounted to approximately 92 million (which represented approximately 0.001% of our total revenue). As there were no expenses directly applicable to such activities under our internal management accounts, we estimate that our net income before tax from maintaining the CBI accounts also amounted to approximately 92 million (which represented approximately 0.003% of our total net income before tax). In light of the discontinuation of the SRE, we intend to restrict activity in the existing CBI accounts to conform to applicable U.S. secondary sanctions.

We also have provided limited export-import financing services to Korean exporters and importers in connection with their trade transactions with Iran that are permitted under the relevant Korean sanctions and not subject to U.S. secondary sanctions, primarily by discounting, advising on or issuing letters of credit, and to a lesser extent, issuing performance bonds on behalf of Korean contractors with respect to Iranian construction projects permitted under the relevant Korean sanctions and not subject to U.S. secondary sanctions. All such transactions are settled through the accounts opened by the CBI with us as described above. In 2018, our total fee revenue from such export-import financing services amounted to approximately 4.3 billion (which represented approximately 0.04% of our total revenue), while our net income before tax from such activities (net of expenses directly applicable to such activities based on our internal management accounts) amounted to approximately 1.7 billion (which represented approximately 0.06% of our total net income before tax). We intend to discontinue this activity when the CBI accounts are restricted.

We also maintain a limited number of deposit accounts in Korea for an Iranian financial institution that the U.S. government has historically viewed as controlled by the government of Iran. These accounts were opened with us before the institution was designated for U.S. sanctions. Under Korean customer protection requirements, we are unable to provide specific information identifying this Iranian financial institution or the volume of its deposits, but the relevant accounts have since been restricted and no transactions are currently allowed through these accounts. Accordingly, in 2018, there were no fee revenues from maintaining such deposit accounts, and there were no expenses directly applicable to such activities under our internal management accounts.

In May 2016, we established a representative office in Tehran, Iran, which had engaged in the collection of local market information without generating any revenue. Following the re-imposition of sanctions, the representative office is no longer operational and does not have any employees or office space.

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We intend to conform our Iran-related dealings with U.S. secondary sanctions previously waived under the SRE. However, regulatory guidance regarding the wind down of SRE-related activities to date is limited, and complications may arise in relation to legacy accounts or activities during or following the wind down. While we do not believe that our activities relating to Iran violate OFAC sanctions or are sanctionable under applicable U.S. secondary sanctions, there is no guarantee that our activities relating to Iran will not be found to violate OFAC sanctions or involve sanctionable activity under U.S. secondary sanctions, or that any other government will not determine that our activities violate applicable sanctions of other countries. Sanctions against Iran continue to evolve rapidly, and future changes in law could also adversely affect us.

Furthermore, there is no guarantee that other countries (including Korea) that had provided sanctions relief to Iran in conjunction with the JCPOA will not decide to re-impose sanctions relating to Iran, especially if there are further negative political developments relating to the Middle East. It is also possible that the United States, Korea or other countries might seek to expand their sanctions relating to Iran in the future beyond those existing currently. The re-imposition or expansion of sanctions relating to Iran may require us to reduce or cease our activities relating to Iran. Such governmental actions and policies may also increase the risk of our violating certain sanctions or becoming a target of sanctions as a result of our past activities relating to Iran. Any such development could have a material adverse impact on our business, reputation or results of operations.

Our business and reputation could be adversely affected if the U.S. government were to determine that our activities relating to Iran violate OFAC sanctions or involve sanctionable activity under U.S. secondary sanctions, or if any other government were to determine that our activities violate applicable sanctions of other countries. Any prohibition or conditions placed on our use of U.S. correspondent accounts could effectively eliminate our access to the U.S. financial system, including U.S. dollar clearing transactions, which would adversely affect our business, and any other sanctions or civil or criminal penalties imposed could also adversely affect our business. If the U.S. government were to challenge the compatibility of our activities relating to Iran with OFAC sanctions or U.S. secondary sanctions, while no assurances can be given that any such measures would be successful, we intend to take all necessary measures to the extent possible to ensure that prohibitions or conditions are not placed on our use of U.S. correspondent accounts, including closing the accounts opened by the CBI with us, if required.

We are cooperating with an investigation led by the U.S. Attorney s Office for the Southern District of New York and the New York State Office of the Attorney General on certain of our transactions involving sanctioned countries under the U.S. sanctions and other U.S. laws, by producing information and documents pursuant to the applicable laws and regulations. We voluntarily reported such transactions to OFAC, including a limited number of previous transactions that may have involved sanctioned countries including Iran, Sudan, Syria and Cuba. It is not possible to predict the outcome of such investigation at this time, and there can be no assurance that such investigation will not result in an unfavorable outcome or adversely affect our business or reputation. Furthermore, beginning in October 2014, the Prosecutors Office of Korea investigated a scheme by which the representative director of a Korean company and one of our employees engaged in fraudulent trade transactions involving our Won-denominated settlement activities through the CBI accounts. These individuals were convicted of violations of the Foreign Exchange Transactions Law and sentenced to imprisonment of 12 months and eight months, respectively, with two years suspension of execution in each case, in September 2015. The Prosecutors Office of Korea completed its investigation in connection with this incident and concluded that neither we nor our executive officers engaged in any wrongdoing. However, the fraudulent transactions in question did not meet the conditions attached to operation of the CBI accounts, and there can be no assurances that U.S. authorities would agree that we were not culpable or that the transactions would not be considered sanctionable.

Furthermore, some of our U.S. investors may be required to divest their investments in us under the laws of certain U.S. states or under internal investment policies relating to companies (or their affiliates) doing business with Iran or may decide for reputational reasons to divest such investments, and some U.S. institutional investors may forego the purchase of our securities. We are aware of initiatives by U.S. governmental entities and U.S. institutional investors, such as pension funds, to adopt or consider adopting laws, regulations or policies prohibiting transactions with or investment in, or requiring divestment from, entities doing business with countries identified as state sponsors of terrorism. There can be no assurance that the foregoing will not occur or that such occurrence will not have a material adverse effect on the value of our common stock and ADSs.

Our operations may be subject to increasing and continually evolving cybersecurity and other technological risks.

With the proliferation of new technologies and the increasing use of the Internet and mobile devices to conduct financial transactions, our operations as a financial institution have been, and will continue to be, subject to an increasing risk of cyber incidents relating to these activities, the nature of which is continually evolving. Our computer systems, software and networks are subject to cyber incidents, such as disruptions, delays or other difficulties affecting our information technology systems, computer viruses or other malicious codes, loss or destruction of data (including confidential client information), unauthorized access, account takeover attempts and cyber attacks. A significant portion of our daily operations relies on our information technology systems, including customer service, billing, the secure processing, storage and transmission of confidential and other information as well as the timely monitoring of a large number of complex transactions. Although we have made substantial and continuous investments to build systems and defenses to address cybersecurity and other technological risks, there is no guarantee that such measures or any other measures can provide adequate security and stability. In addition, because methods used to cause cyber attacks change frequently or, in some cases, are not recognized until launched, we may be unable to implement effective preventive measures or proactively address these methods. Furthermore, these cyber threats may arise from human error, accidental technological failure and third parties with whom we do business. If we were to be subject to a system failure or other cyber incident, it could result in the disclosure of confidential client information, damage to our reputation with our customers and in the market, customer dissatisfaction, additional costs to us, regulatory penalties, exposure to litigation and other financial losses to both us and our customers, which could have an adverse effect on our business and results of operations.

Our business may be adversely affected by legal claims and regulatory actions against us.

We are subject to the risk of legal claims and regulatory actions, which may expose us to monetary damages and legal costs, injunctive relief, criminal and civil penalties, sanctions against our management and employees and regulatory restrictions on our operations, as well as reputational harm. See Item 8.A. Consolidated Statements and Other Financial Information Legal Proceedings.

We are unable to predict the outcome of many of the legal claims and regulatory actions in which we are involved, and the scope of the claims or actions or the total amount in dispute in such matters may increase. Furthermore, adverse decisions, findings or resolutions in such matters could encourage other parties, including governmental authorities in other jurisdictions, to bring similar claims and actions against us. Accordingly, the outcome of current and future legal claims and regulatory actions, particularly those for which it is difficult to assess the maximum potential exposure or the ultimate adverse impact with any degree of certainty, may materially and adversely impact our business, reputation, results of operations and financial condition.

We are generally subject to Korean corporate governance and disclosure standards, which differ in significant respects from those in other countries.

Companies in Korea, including us, are subject to corporate governance standards applicable to Korean public companies which differ in many respects from standards applicable in other countries, including the United States. As a reporting company registered with the U.S. Securities and Exchange Commission and listed on the New York Stock Exchange, we are subject to certain corporate governance standards as mandated by the Sarbanes-Oxley Act of 2002. However, foreign private issuers, including us, are exempt from certain corporate governance requirements under the

Sarbanes-Oxley Act or under the rules of the New York Stock Exchange.

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There may also be less publicly available information about Korean companies, such as us, than is regularly made available by public or non-public companies in other countries. Such differences in corporate governance standards and less public information could result in less than satisfactory corporate governance practices or disclosure to investors in certain countries.

Risks relating to government regulation and policy

Strengthening of consumer protection laws applicable to financial institutions could adversely affect our operations.

As a financial service provider, we are subject to a variety of regulations in Korea that are designed to protect financial consumers. In recent years, in light of heightened public concern regarding privacy issues, the Korean government has placed greater emphasis on protection of personal information by financial institutions and has implemented a number of measures to enhance consumer protection. Under the Personal Information Protection Act, financial institutions, as personal information managers, may not collect, store, maintain, utilize or provide resident registration numbers of their customers, unless other laws or regulations specifically require or permit the management of resident registration numbers. In addition, under the Use and Protection of Credit Information Act, a financial institution has a higher duty to protect all information that it collects from its customers and is required to treat such information as credit information. A financial institution s ability to transfer or provide the information to its affiliates or holding company is considerably restricted. Treble damages may be imposed on a financial institution for leakage of such information. Furthermore, under the Electronic Financial Transaction Act, a financial institution is primarily responsible for compensating its customers harmed by a cyber security breach affecting the financial institution even if the breach is not directly attributable to the financial institution.

In June 2016, the Financial Services Commission proposed the enactment of the Act on the Financial Consumer Protection Framework, which was submitted to the Korean National Assembly in May 2017. If the Act is adopted as proposed, we as a financial instrument distributor will be subject to heightened investor protection measures, including stricter distribution guidelines, improved financial dispute resolution procedures, increased liability for customer losses and newly imposed penalty surcharges.

These and other measures that may be implemented by the Korean government to strengthen consumer protection laws applicable to financial institutions may limit our operational flexibility and cause us to incur significant additional compliance costs, as well as subject us to increased potential liability to our customers, which could adversely affect our business and performance.

The Korean government may promote lending and financial support by the Korean financial industry to certain types of borrowers as a matter of policy, which financial institutions, including us, may decide to follow.

Through its policy guidelines and recommendations, the Korean government has promoted and, as a matter of policy, may continue to attempt to promote lending by the Korean financial industry to particular types of borrowers. For example, the Korean government has in the past announced policy guidelines requesting financial institutions to participate in remedial programs for troubled corporate borrowers, as well as policies aimed at promoting certain sectors of the economy, including measures such as making low interest funding available to financial institutions that lend to these sectors. The government has in this manner encouraged mortgage lending to low-income individuals and lending to small- and medium-sized enterprises. We expect that all loans or credits made pursuant to these government policies will be reviewed in accordance with our credit approval procedures. However, these or any future government policies may influence us to lend to certain sectors or in a manner in which we otherwise would not in the absence of such policies.

In the past, the Korean government has also announced policies under which financial institutions in Korea are encouraged to provide financial support to particular sectors. For example, in light of the deteriorating financial condition and liquidity position of small- and medium-sized enterprises in Korea and adverse conditions in the Korean economy affecting such enterprises, the Korean government introduced measures intended to encourage Korean banks to provide financial support to small- and medium-sized enterprise borrowers. See Risks relating to our corporate credit portfolio The largest portion of our exposure is to small- and medium-sized enterprises, and financial difficulties experienced by companies in this segment may result in a deterioration of our asset quality and have an adverse impact on us. In addition, in March 2015, in response to increasing levels of consumer debt and amid concerns over the debt-servicing capacity of retail borrowers if interest rates were to rise, the Korean government requested Korean banks to participate in a mortgage loan refinancing program aimed at reducing the payment burden on and improving the asset quality of outstanding mortgage loans. See Risks relating to our consumer credit portfolio We may experience increases in delinquencies in our consumer loan and credit card portfolios.

The Korean government may in the future request financial institutions in Korea, including us, to make investments in or provide other forms of financial support to particular sectors of the Korean economy as a matter of policy, which financial institutions, including us, may decide to accept. We may incur costs or losses as a result of providing such financial support.

The Financial Services Commission may impose burdensome measures on us if it deems us or one of our subsidiaries to be financially unsound.

If the Financial Services Commission deems our financial condition or the financial condition of our subsidiaries to be unsound, or if we or our subsidiaries fail to meet applicable regulatory standards, such as minimum capital adequacy and liquidity ratios, the Financial Services Commission may order or recommend, among other things:

- admonitions or warnings with respect to our officers;
- capital increases or reductions;
- assignments of contractual rights and obligations relating to financial transactions;
- a suspension of performance by our officers of their duties and the appointment of receivers;
- disposals of property holdings or closures of subsidiaries or branch offices or downsizing;
- stock cancellations or consolidations;
- mergers with other financial institutions;
- acquisition of us by a third party; and
- suspensions of a part or all of our business operations.

If any of these measures are imposed on us by the Financial Services Commission, they could hurt our business, results of operations and financial condition. In addition, if the Financial Services Commission orders us to partially or completely reduce our capital, you may lose part or all of your investment.

Risks relating to Korea

Unfavorable financial and economic developments in Korea may have an adverse effect on us.

We are incorporated in Korea, and a substantial majority of our operations are located in Korea. As a result, we are subject to political, economic, legal and regulatory risks specific to Korea. The economic indicators in Korea in recent years have shown mixed signs of growth and uncertainty, and future growth of the Korean economy is subject to many factors beyond our control, including developments in the global economy.

In recent years, adverse conditions and volatility in the worldwide financial markets, fluctuations in oil and commodity prices and the general weakness of the global economy have contributed to the uncertainty of global economic prospects in general and have adversely affected, and may continue to adversely affect, the Korean economy. See Other risks relating to our business Unfavorable changes in the global financial markets could adversely affect our results of operations and financial condition. The value of the Won relative to major

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foreign currencies has fluctuated significantly. Furthermore, as a result of changing global and Korean economic conditions, there has been volatility in the stock prices of Korean companies in recent years. Future declines in the Korea Composite Stock Price Index, known as the KOSPI, and large amounts of sales of Korean securities by foreign investors and subsequent repatriation of the proceeds of such sales may adversely affect the value of the Won, the foreign currency reserves held by financial institutions in Korea, and the ability of Korean companies to raise capital. Any future deterioration of the Korean or global economy could adversely affect our business, financial condition and results of operations.

Developments that could have an adverse impact on the Korean economy include:

- adverse conditions or uncertainty in the economies of countries and regions that are important export markets for Korea, such as China, the United States, Europe and Japan, or in emerging market economies in Asia or elsewhere, as well as increased uncertainty regarding a future Brexit and deteriorating economic and trade relations between the United States and China;

- 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 Japanese yen exchange rates or revaluation of the Chinese renminbi), interest rates, inflation rates or stock markets;

- 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 controversy between Korea and China, which is Korea s largest export market, regarding the deployment of a Terminal High Altitude Area Defense system in Korea by the United States in March 2017 and the ensuing economic and other retaliatory actions by China);

- increased sovereign default risks in select countries and the resulting adverse effects on the global financial markets;

- a deterioration in the financial condition or performance of small- and medium-sized enterprises and other companies in Korea due to the Korean government s policies to increase minimum wages and limit working hours of employees;

- investigations of Korean conglomerates and their senior management for possible misconduct;

- a continuing rise in the level of household debt and increasing delinquencies and credit defaults by consumer or small- and medium-sized enterprise borrowers in Korea;

- declines in consumer confidence and a slowdown in consumer spending in the Korean or global economy;

social and labor unrest;

decreases in the market prices of Korean real estate;

the economic impact of any pending or future free trade agreements or of any changes to existing free trade agreements;

a decrease in tax revenue and a substantial increase in the Korean government s expenditures 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 *chaebols*, other large troubled companies (including those in the construction, shipbuilding and shipping sectors) and their suppliers;

loss of investor confidence arising from corporate accounting irregularities, allegations of corruption and corporate governance issues concerning certain *chaebols*;

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

geo-political uncertainty and the risk of further attacks by terrorist groups around the world;

natural or man-made disasters that have a significant adverse economic or other impact on Korea or its major trading partners;

the occurrence of severe health epidemics in Korea or other parts of the world (such as the Middle East Respiratory Syndrome outbreak in Korea in 2015);

political uncertainty or increasing strife among or within political parties in Korea;

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

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

changes in financial regulations in Korea.

Escalations in tensions with North Korea could have an adverse effect on us and the market price of our ADSs.

Relations between Korea and North Korea have been tense throughout Korea s modern history. The level of tension between the two Koreas has fluctuated and may increase abruptly as a result of current and future events. In particular, there have been heightened security concerns in recent years stemming from North Korea s nuclear weapon and ballistic missile programs as well as its hostile military actions against Korea. Some of the significant incidents in 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, 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 Korean government has repeatedly condemned the provocations and flagrant violations of relevant United Nations Security Council resolutions. In February 2016, the government also closed the inter-Korea Gaeseong Industrial Complex in response to North Korea s fourth nuclear test in January 2016. 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 near the Korean demilitarized zone. Claiming the landmines were set by North Koreans, the Korean army reinitiated 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 Koreas.

In March 2010, a Korean naval vessel was destroyed by an underwater explosion, killing many of the crewmen on board. The Korean government formally accused North Korea of causing the sinking, while North Korea denied responsibility. Moreover, in November 2010, North Korea fired more than one hundred artillery shells that hit Korea s Yeonpyeong Island near the Northern Limit Line, which acts as the de facto maritime boundary between Korea and North Korea on the west coast of the Korean peninsula, causing casualties and significant property damage. The Korean government condemned North Korea for the attack and vowed stern retaliation should there be further provocation.

North Korea s economy also faces severe challenges, which may further aggravate social and political pressures within North Korea. Although bilateral summit meetings between the two Koreas were held in April 2018, May 2018 and September 2018 and between the United States and North Korea in June 2018 and February

2019, there can be no assurance that the level of tensions affecting the Korean peninsula will not escalate in the future. Any further increase in tensions, which may occur, for example, if North Korea experiences a leadership crisis, high-level contacts between Korea and North Korea break down or military hostilities occur, could have a material adverse effect on the Korean economy and on our business, financial condition and results of operations and the market value of our common stock and ADSs.

Labor unrest in Korea may adversely affect our operations.

Economic difficulties in Korea or increases in corporate reorganizations and bankruptcies could result in layoffs and higher unemployment. Such developments could lead to social unrest and substantially increase government expenditures for unemployment compensation and other costs for social programs. According to statistics from the Korea National Statistical Office, the unemployment rate increased from 3.6% in 2015 to 3.7% in 2016 and 2017 and 3.8% in 2018. Further increases in unemployment and any resulting labor unrest in the future could adversely affect our operations, as well as the operations of many of our customers and their ability to repay their loans, and could adversely affect the financial condition of Korean companies in general, depressing the price of their securities. Furthermore, the government s privatization plan with respect to us contemplates the sale of its remaining ownership interest in us to one or more third parties, which may lead to labor unrest among our employees. See Item 4.A. History and Development of the Company Privatization Plan. Any of these developments may have an adverse effect on our financial condition and results of operations.

Risks relating to our common stock and ADSs

We or our major shareholders may sell shares of our common stock in the future, and such sales may adversely affect the market price of our common stock and ADSs and may dilute your investment and relative ownership interest in us.

We have no current plans for any public offerings of our common stock, ADSs or securities exchangeable for or convertible into such securities. However, it is possible that we may decide to offer or sell such securities in the future.

In addition, the KDIC currently owns 124,604,797 shares, or18.32%, of our outstanding common stock, and IMM Private Equity, Inc., through its special purpose company Nobis1, Inc., currently owns 40,560,000 shares, or 5.96%, of our outstanding common stock. See Item 7.A. Major Shareholders. In the future, such major shareholders or any other shareholder that owns a large number of shares of our outstanding common stock may choose to sell large blocks of our common stock in a public offering or privately to a strategic or financial investor, including a sale by the KDIC for the purpose of recovering the public funds it injected into us. For example, in accordance with the Korean government s privatization plan, the KDIC sold 40,143,022 shares of Woori Bank s common stock (representing 5.9% of its outstanding common stock) in a private sale in Korea in December 2014 and an aggregate of 200,685,395 shares of Woori Bank s common stock (representing 29.7% of its outstanding common stock) in stakes ranging from 3.7% to 6.0% to seven financial companies through a bidding process in December 2016 and January 2017. In 2017, pursuant to a series of transactions related to call options previously granted in connection with the KDIC s sale of Woori Bank s common stock in December 2014, the KDIC sold an aggregate of 19,852,364 shares of Woori Bank s common stock (representing 2.94% of its outstanding common stock). See Risks relating to our structure and strategy The implementation of the Korean government s privatization plan may have an adverse effect on us and your interests as a shareholder. We expect the KDIC to sell all or a portion of the shares of our common stock it owns to one or more purchasers in the future.

Any future offerings or sales by us of our common stock or ADSs or securities exchangeable for or convertible into such securities, significant sales of our common stock by a major shareholder, or the public perception that such an offering or sale may occur, could have an adverse effect on the market price of our common stock and ADSs. Furthermore, any offerings by us in the future of any such securities could have a dilutive impact on your investment and relative ownership interest in us.

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Future sales by the KDIC of the shares of our common stock it owns may result in adverse Korean tax consequences for you.

Under applicable Korean tax laws, a non-Korean holder who held Woori Bank s common stock or ADSs prior to our establishment as a new financial holding company in January 2019 pursuant to a comprehensive stock transfer under Korean law will be able to defer taxation on any capital gains arising from the stock transfer, by virtue of the Special Tax Treatment Control Law of Korea, or the STTCL, until such holder s sale of our common stock or ADSs received in the stock transfer, at which time the tax basis of such common stock or ADSs will be the acquisition price at which such holder acquired such Woori Bank common stock or ADSs. However, non-Korean holders that are corporations may not defer such portion of tax on capital gains arising from the stock transfer that is attributable to the amount by which the market price of our common stock or ADSs (as calculated in accordance with applicable Korean laws and regulations) is in excess of the market price of Woori Bank s common stock or ADSs. Any such non-Korean holder of our common stock or ADS, including a corporation, which seeks to defer taxation on capital gains arising from the stock transfer will be required to submit a tax deferral application in prescribed form to the Korean tax authorities when filing its tax return for the 2019 tax year.

Notwithstanding the foregoing, if our largest shareholder, the KDIC, disposes of more than 50% of the shares of our common stock it received in the stock transfer within two years from the end of 2019 (the fiscal year in which the date of the stock transfer falls), the deferral of taxation on capital gains will not be available, and a non-Korean holder who received our common stock or ADSs in the stock transfer will generally be subject to Korean tax on capital gains in an amount equal to the lower of (i) 11.0% (inclusive of local income surtax) of the gross realization proceeds (i.e., the value of our common stock or ADSs such holder received in the stock transfer) or (ii) 22.0% (inclusive of local income surtax) of the net realized gain. However, such capital gains tax may not apply, or may apply at a reduced rate, if such holder establishes its entitlement to an exemption or rate reduction under an applicable tax treaty or Korean tax law. See Item 10.E. Taxation Korean Taxation Tax Treaties for information regarding tax treaty benefits. Accordingly, if you received our common stock or ADSs in the stock transfer, future sales by the KDIC of the shares of our common stock it owns may result in adverse Korean tax consequences for you.

Ownership of our common stock is restricted under Korean law.

Under the Financial Holding Company Act, a single shareholder, together with its affiliates, is generally prohibited from owning more than 10.0% of the issued and outstanding shares of voting stock of a bank holding company such as us that controls a nationwide bank, with the exception of certain shareholders that are non-financial business group companies, whose applicable limit was reduced from 9.0% to 4.0% pursuant to an amendment of the Financial Holding Company Act which became effective on February 14, 2014. To the extent that the total number of shares of our common stock (including those represented by ADSs) that you and your affiliates own together exceeds the applicable limits, you will not be entitled to exercise the voting rights for the excess shares, and the Financial Services Commission may order you to dispose of the excess shares within a period of up to six months. Failure to comply with such an order would result in an administrative fine of up to 0.03% of the book value of such shares per day until the date of disposal. Non-financial business group companies can no longer acquire more than 4.0% of the issued and outstanding shares of voting stock of a bank holding company pursuant to the amended Financial Holding Company Act, which grants an exception for non-financial business group companies which, at the time of the enactment of the amended provisions, held more than 4.0% of the shares thereof with the approval of the Financial Services Commission before the amendment. See Item 4.B. Business Overview Supervision and Regulation Principal Regulations Applicable to Financial Holding Companies Restrictions on Ownership of a Financial Holding Company.

You will not be able to exercise dissent and appraisal rights unless you have withdrawn the underlying shares of our common stock and become our direct shareholder.

In some limited circumstances, including the transfer of the whole or any significant part of our business and the merger or consolidation of us with another company, dissenting shareholders have the right to require us

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to purchase their shares under Korean law. However, if you hold our ADSs, you will not be able to exercise such dissent and appraisal rights if the depositary refuses to do so on your behalf. Our deposit agreement does not require the depositary to take any action in respect of exercising dissent and appraisal rights. In such a situation, holders of our ADSs must withdraw the underlying common stock from the ADS facility (and incur charges relating to that withdrawal) and become our direct shareholder prior to the record date of the shareholders meeting at which the relevant transaction is to be approved, in order to exercise dissent and appraisal rights.

You may be limited in your ability to deposit or withdraw common stock.

Under the terms of our deposit agreement, holders of common stock may deposit such stock with the depositary s custodian in Korea and obtain ADSs, and holders of ADSs may surrender ADSs to the depositary and receive common stock. However, to the extent that a deposit of common stock exceeds any limit that we may specify from time to time, that common stock will not be accepted for deposit unless our consent with respect to such deposit has been obtained. We currently have not set any such limit; however, we have the right to do so at any time. Under the terms of the deposit agreement, no consent would be required if the shares of common stock were to be obtained through a dividend, free distribution, rights offering or reclassification of such stock. We have consented, under the terms of the deposit agreement, to any deposit unless the deposit would be prohibited by applicable laws or violate our articles of incorporation. If we choose to impose a limit on deposits in the future, however, we might not consent to the deposit of any additional common stock. In that circumstance, if you surrender ADSs and withdraw common stock, you may not be able to deposit the stock again to obtain ADSs. See Item 4.B. Business Overview Supervision and Regulation Restrictions Applicable to Shares and Item 10.D. Exchange Controls Restrictions Applicable to Shares.

You will not have preemptive rights in some circumstances.

The Korean Commercial Code, as amended, and our articles of incorporation require us, with some exceptions, to offer shareholders the right to subscribe for new shares of our common stock in proportion to their existing shareholding ratio whenever new shares are issued. If we offer any rights to subscribe for additional shares of our common stock or any rights of any other nature, the depositary, after consultation with us, may make the rights available to holders of our ADSs or use commercially feasible efforts to dispose of the rights on behalf of such holders, in a riskless principal capacity, and make the net proceeds available to such holders. The depositary will make rights available to holders of our ADSs only if:

- we have requested in a timely manner that those rights be made available to such holders;

- the depositary has received the documents that are required to be delivered under the terms of the deposit agreement, which may include confirmation that a registration statement filed by us under the U.S. Securities Act of 1933, as amended, or the Securities Act, is in effect with respect to those shares or that the offering and sale of those shares is exempt from or is not subject to the registration requirements of the Securities Act; and

- the depositary determines, after consulting with us, that the distribution of rights is lawful and commercially feasible.

Holders of our common stock located in the United States may not exercise any rights they receive absent registration or an exemption from the registration requirements under the Securities Act.

We are under no obligation to file any registration statement with the U.S. Securities and Exchange Commission or to endeavor to cause such a registration statement to be declared effective. Moreover, we may not be able to establish an exemption from registration under the Securities Act. Accordingly, you may be unable to participate in our rights offerings and may experience dilution in your holdings. If a registration statement is required for you to exercise preemptive rights but is not filed by us or is not declared effective, you will not be able to exercise your preemptive rights for additional ADSs and you will suffer dilution of your equity interest in us. If the depositary is unable to sell rights that are not exercised or not distributed or if the sale is not lawful or feasible, it will allow the rights to lapse, in which case you will receive no value for these rights.

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Your dividend payments and the amount you may realize upon a sale of your ADSs will be affected by fluctuations in the exchange rate between the U.S. dollar and the Won.

Our common stock is listed on the KRX KOSPI Market of the Korea Exchange and quoted and traded in Won. Cash dividends, if any, in respect of the shares represented by the ADSs will be paid to the depositary in Won and then converted by the depositary into U.S. dollars, subject to certain conditions. Accordingly, fluctuations in the exchange rate between the Won and the U.S. dollar will affect, among other things, the amounts you will receive from the depositary in respect of dividends, the U.S. dollar value of the proceeds that you would receive upon a sale in Korea of the shares of our common stock obtained upon surrender of ADSs and the secondary market price of ADSs. Such fluctuations will also affect the U.S. dollar value of dividends and sales proceeds received by holders of our common stock.

The market value of your investment may fluctuate due to the volatility of, and government intervention in, the Korean securities market.

Our common stock is listed on the KRX KOSPI Market, which has a smaller market capitalization and is more volatile than the securities markets in the United States and many European countries. The market value of ADSs may fluctuate in response to the fluctuation of the trading price of shares of our common stock on the KRX KOSPI Market. The KRX KOSPI Market has experienced substantial fluctuations in the prices and volumes of sales of listed securities and the KRX KOSPI Market has prescribed a fixed range in which share prices are permitted to move on a daily basis. The KOSPI was 2,220.51 on April 23, 2019. There is no guarantee that the stock prices of Korean companies will not decline again in the future. Like other securities markets, including those in developed markets, the Korean securities market has experienced problems including market manipulation, insider trading and settlement failures. The recurrence of these or similar problems could have a material adverse effect on the market price and liquidity of the securities of Korean companies, including our common stock and ADSs, in both the domestic and the international markets.

The Korean government has the potential ability to exert substantial influence over many aspects of the private sector business community, and in the past has exerted that influence from time to time. For example, the Korean government has induced mergers to reduce what it considers excess capacity in a particular industry and has also induced private companies to publicly offer their securities. Similar actions in the future could have the effect of depressing or boosting the Korean securities market, whether or not intended to do so. Accordingly, actions by the government, or the perception that such actions are taking place, may take place or has ceased, may cause sudden movements in the market prices of the securities of Korean companies in the future, which may affect the market price and liquidity of our common stock and ADSs.

If the Korean government deems that emergency circumstances are likely to occur, it may restrict you and the depositary from converting and remitting dividends and other amounts in U.S. dollars.

If the Korean government deems that certain emergency circumstances, including, but not limited to, severe and sudden changes in domestic or overseas economic circumstances, extreme difficulty in stabilizing the balance of payments or implementing currency, exchange rate and other macroeconomic policies, have occurred or are likely to occur, it may impose certain restrictions provided for under the Foreign Exchange Transaction Law, including the suspension of payments or requiring prior approval from governmental authorities for any transaction. See Item 10.D. Exchange Controls General.

Other Risks

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

We are a corporation with limited liability organized under the laws of Korea. Substantially all of our directors and officers and other persons named in this annual report reside in Korea, and all or a significant portion of the assets of our directors and officers and other persons named in this annual report and a substantial majority of our assets are located in Korea. As a result, it may not be possible for you to effect service of process within the United States, or to enforce against them or us 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.

Item 4. INFORMATION ON THE COMPANY

Item 4.A. *History and Development of the Company*

Overview

We are a financial holding company that was newly established on January 11, 2019 pursuant to a comprehensive stock transfer under Korean law, whereby holders of the common stock of Woori Bank and certain of its subsidiaries transferred all of their shares to us and in return received shares of our common stock. We were established under the Financial Holding Company Act of Korea, which, together with associated regulations and a related Enforcement Decree, enables banks and other financial institutions, including insurance companies, invest trust companies, credit card companies and securities companies, to be organized and managed under the auspices of a single financial holding company. As a result of the stock transfer, Woori Bank and certain of its former wholly-owned subsidiaries, Woori FIS Co., Ltd., Woori Finance Research Institute Co., Ltd., Woori Credit Information Co., Ltd., Woori Fund Services Co., Ltd. and Woori Private Equity Asset Management Co., Ltd., became our direct and wholly-owned subsidiaries. Accordingly, our overall business and operations after the stock transfer, on a consolidated basis, are identical to those of Woori Bank on a consolidated basis immediately prior to the stock transfer.

The stock transfer constituted a succession for purposes of Rule 12g-3(a) under the Securities Exchange Act of 1934, as amended, such that our common stock was deemed registered under Section 12(b) of the Exchange Act by operation of Rule 12g-3(a). Following the stock transfer, we file reports under the Exchange Act as the successor issuer to Woori Bank.

Our legal and commercial name is Woori Financial Group Inc. Our registered office and corporate headquarters are located at 51, Sogong-ro, Jung-gu, Seoul, Korea. Our telephone number is 822-2125-2000. Our website address is *http://www.woorifg.com.*

The U.S. Securities and Exchange Commission, or the SEC, maintains a website (*http://www.sec.gov*), which contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC.

History

Establishment of Woori Bank

The predecessor of Woori Bank was originally established in 1899 and operated as the Commercial Bank of Korea until 1998, when it was acquired by the KDIC and merged with another commercial bank, Hanil Bank, which had been established in 1932. The surviving entity in the merger was renamed Hanvit Bank, which name was changed to Woori Bank in May 2002.

Establishment of Woori Finance Holdings

In response to a financial and economic downturn in Korea beginning in late 1997, the Korean government announced and implemented a series of comprehensive policy packages to address structural weaknesses in the Korean economy and the financial sector. As part of these measures, on October 1, 1998, the KDIC purchased 95.0% of the outstanding shares of the Commercial Bank of Korea and 95.6% of the outstanding shares of Hanil Bank, and subsequently merged Hanil Bank into the Commercial Bank of Korea (which was renamed Hanvit Bank). These banks had suffered significant losses in 1997 and 1998. The Korean government took pre-emptive measures to ensure the survival of these and other banks as it believed that bank failures would have a substantial negative impact on the Korean economy.

In December 2000, the Korean government wrote down the capital of Hanvit Bank, as well as Kyongnam Bank, Kwangju Bank and Peace Bank of Korea, to zero. It accomplished this by having the Financial Services

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Commission issue a capital reduction order with respect to these banks pursuant to its regulatory authority. The Korean government also decided to recapitalize these banks by injecting public funds through the KDIC. In December 2000, the KDIC made initial capital injections to Hanvit Bank (2,764 billion), Kyongnam Bank (259 billion), Kwangju Bank (170 billion) and Peace Bank of Korea (273 billion), in return for new shares of those banks. The KDIC also agreed to make additional capital contributions, not involving the issuance of new shares, in the future, which were made in September 2001 to Hanvit Bank (1,877 billion), Kyongnam Bank (94 billion), Kwangju Bank (273 billion) and Peace Bank of Korea (339 billion).

In addition, in November 2000, the KDIC established Hanaro Merchant Bank to restructure substantially all of the assets and liabilities of four failed merchant banks (Yeungnam Merchant Banking Corporation, Central Banking Corporation, Korea Merchant Banking Corporation and H&S Investment Bank) that were transferred to it.

In March 2001, the KDIC established Woori Finance Holdings as a new financial holding company and transferred all of the shares in each of Hanvit Bank, Kyongnam Bank, Kwangju Bank, Peace Bank of Korea and Hanaro Merchant Bank held by the KDIC to Woori Finance Holdings in exchange for its newly issued shares. Accordingly, Woori Finance Holdings became the sole owner of those entities. Woori Finance Holdings subsequently listed its common stock on the KRX KOSPI Market in June 2002 and listed ADSs representing its common stock on the New York Stock Exchange in September 2003.

Reorganization and Expansion

Following its establishment and its acquisition of its subsidiaries, Woori Finance Holdings developed a reorganization and integration plan designed to reorganize the corporate structure of some of its subsidiaries and integrate its operations under a single management structure. As part of this plan:

- From December 2001 through February 2002, Peace Bank of Korea was restructured by:
  - splitting off its commercial banking operations and merging them into Woori Bank;
  - changing the name of Peace Bank of Korea to Woori Credit Card; and
  - transferring the credit card operations of Woori Bank to Woori Credit Card.
- In March 2003, the credit card operations of Kwangju Bank were transferred to Woori Credit Card.
- In August 2003, Woori Investment Bank (formerly named Hanaro Merchant Bank) was merged with Woori Bank.

In succeeding years, Woori Finance Holdings and Woori Bank further reorganized and expanded their operations, including through mergers, acquisitions and investments. For example:

In March 2004, Woori Credit Card was merged with Woori Bank.

In October and December 2004, Woori Finance Holdings acquired an aggregate 27.3% voting interest in LG Investment & Securities Co., Ltd., which was subsequently renamed Woori Investment & Securities.

In May 2005, Woori Finance Holdings acquired a 90.0% interest in LG Investment Trust Management Co., Ltd., which was subsequently renamed Woori Asset Management.

In October 2005, Woori Bank established Woori Private Equity as a consolidated subsidiary.

In April 2008, Woori Finance Holdings acquired a 51.0% interest in LIG Life Insurance Co., Ltd., which was subsequently renamed Woori Aviva Life Insurance.

In March 2011, Woori Finance Holdings acquired certain assets and assumed certain liabilities of Samhwa Mutual Savings Bank through a newly established subsidiary, Woori FG Savings Bank.

In September 2012, Woori FG Savings Bank acquired certain assets and assumed certain liabilities of Solomon Mutual Savings Bank.

In October 2012, Woori Finance Holdings established Woori Finance Research Institute, which engages in economic and finance research, management consulting, and management and sales of intellectual property rights.

In April 2013, Woori Bank effected a spin-off of its credit card business into a newly established wholly-owned subsidiary of Woori Finance Holdings, Woori Card.

In June 2013, through an internal reorganization, Kumho Investment Bank (previously a subsidiary of Woori Private Equity and subsequently renamed Woori Investment Bank), in which Woori Finance Holdings held a 41.6% interest, became its consolidated subsidiary, and 70 billion of new capital was injected into such entity.

In January 2014, Woori Bank completed the purchase of an additional 27% equity interest (in addition to the 6% equity interest it previously acquired through its subsidiary PT. Bank Woori Indonesia) in PT. Bank Himpunan Saudara 1906, an Indonesian commercial bank with a network of over 100 branches and offices throughout Indonesia. In December 2014, PT. Bank Woori Indonesia merged with and into PT. Bank Himpunan Saudara 1906. The merged entity, in which Woori Banks holds a 79.9% equity interest, was renamed PT Bank Woori Saudara Indonesia 1906, Tbk and became its consolidated subsidiary.

In October 2016, Woori Bank acquired a 51% equity interest in Wealth Development Bank Corp., a thrift bank in the Philippines with a network of 16 branches and approximately 300 employees.

In November 2016, Woori Bank established a local subsidiary in Vietnam, Woori Bank Vietnam, which commenced operations in January 2017.

In June 2018, Woori Bank acquired VisionFund (Cambodia) Ltd., a microfinance lender in Cambodia, which was renamed WB Finance Co., Ltd.

In November 2018, Woori Bank established a German subsidiary, Woori Bank Europe GmbH, which is headquartered in Frankfurt.

In addition, in April 2019, we entered into share purchase agreements for the acquisitions of (i) a 73% equity interest in Tongyang Asset Management Corp. from Tongyang Life Insurance Co., Ltd. and (ii) ABL Global Asset Management Co. from Anbang Asset Management (Hong Kong) Co., Limited. The purchase prices for such acquisitions are subject to confidentiality pursuant to the share purchase agreements. As of December 31, 2018, the Tongyang Asset Management Corp. had total assets of 102 billion and ABL Global Asset Management Co. had total assets of 34 billion. We expect to complete such acquisitions in the second quarter of 2019, subject to regulatory approvals and other closing conditions.

Privatization Plan

In June 2013, the Korean government, through the Public Funds Oversight Committee of the Financial Services Commission, announced an updated plan to privatize Woori Finance Holdings and its former subsidiaries, including

Woori Bank. The privatization plan provided for the segregation of such entities into three groups and the disposal of the Korean government s interest in these entities held through the KDIC in a series of transactions, many of which have been completed.

Spin-off of Kwangju Bank and Kyongnam Bank

In August 2013, the board of directors of Woori Finance Holdings approved a plan to establish two new companies, KJB Financial Group and KNB Financial Group (which we refer to as the New Holdcos), through a spin-off of its businesses related to the holding of the shares and thereby controlling the business operations of Kwangju Bank and Kyongnam Bank, respectively. The spin-off was approved at an extraordinary general meeting of the shareholders of Woori Finance Holdings held in January 2014 and was effected in May 2014. After the spin-off, KJB Financial Group owned the shares of Kwangju Bank previously held by Woori Finance

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Holdings, and KNB Financial Group owned the shares of Kyongnam Bank previously held by Woori Finance Holdings. Woori Finance Holdings no longer owned any shares of Kwangju Bank or Kyongnam Bank, and neither they nor the New Holdcos were its subsidiaries, after the spin-off. Following the spin-off, each of these banks was merged with the relevant New Holdco.

In October 2014, the KDIC sold its 56.97% ownership interest in Kwangju Bank and Kyongnam Bank to JB Financial Group and BS Financial Group, respectively.

Disposal of Woori Financial, Woori Asset Management, Woori F&I, Woori Investment & Securities, Woori Aviva Life Insurance and Woori FG Savings Bank

In March 2014, Woori Finance Holdings sold its 52.0% ownership interest in Woori Financial to KB Financial Group for the sale price of 280 billion.

In May 2014, Woori Finance Holdings sold its 100.0% ownership interest in Woori Asset Management to Kiwoom Securities for the sale price of 76 billion.

In June 2014, Woori Finance Holdings sold its 100.0% ownership interest in Woori F&I to Daishin Securities for the sale price of 368 billion.

In June 2014, Woori Finance Holdings also sold its 37.9% ownership interest in Woori Investment & Securities, its 51.6% ownership interest in Woori Aviva Life Insurance and its 100.0% ownership interest in Woori FG Savings Bank to NongHyup Financial Group Inc. for the sale price of 1,039 billion in a collective sale.

Merger of Woori Bank and Woori Finance Holdings

In July 2014, Woori Bank entered into a merger agreement with Woori Finance Holdings, providing for the merger of Woori Finance Holdings with and into Woori Bank. The merger agreement was approved by the shareholders of Woori Finance Holdings at an extraordinary general meeting held on October 10, 2014. Pursuant to the merger agreement, Woori Finance Holdings merged with and into Woori Bank on November 1, 2014, such that Woori Bank remained as the surviving entity, and Woori Finance Holdings ceased to exist, after the merger. In connection with the merger, shareholders of Woori Finance Holdings recorded in its shareholder register as of November 1, 2014 received one share of Woori Bank s common stock for each share of common stock of Woori Finance Holdings they held.

As a result of the merger, the other remaining subsidiaries of Woori Finance Holdings, including Woori Card, Woori Private Equity, Woori FIS, Woori Investment Bank and Woori Finance Research Institute, became Woori Bank s subsidiaries. Accordingly, Woori Bank s overall business and operations after the merger, on a consolidated basis, were substantially identical to those of Woori Finance Holdings on a consolidated basis prior to the merger.

Woori Bank was an unlisted corporation prior to the merger, while Woori Finance Holdings had its common stock listed on the KRX KOSPI Market and its ADSs listed on the New York Stock Exchange. Following the merger, Woori Bank became newly listed on the KRX KOSPI Market and succeeded to Woori Finance Holdings listing on the New York Stock Exchange.

Sales of the KDIC s Ownership Interest

Pursuant to the Korean government s privatization plan, in December 2014, the KDIC sold 40,143,022 shares of Woori Bank s common stock (representing 5.9% of its outstanding common stock) in a private sale in Korea. In addition, in

December 2016 and January 2017, the KDIC sold an aggregate of 200,685,395 shares of Woori Bank s common stock (representing 29.7% of its outstanding common stock) in stakes ranging from 3.7% to 6.0% to seven financial companies through a bidding process. Pursuant to a commitment made by the KDIC in connection with such bidding process, five persons, each nominated by one of the winning bidders, were elected as new outside directors at an extraordinary general meeting of Woori Bank s shareholders held in December

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2016. In December 2018, five persons, each nominated by one of such winning bidders, were elected at an extraordinary general meeting of Woori Bank s shareholders to serve as our outside directors upon our establishment. See Item 6.A. Directors and Senior Management Board of Directors Outside Directors. In 2017, pursuant to a series of transactions related to call options previously granted in connection with the KDIC s sale of Woori Bank s common stock in December 2014, the KDIC sold an aggregate of 19,852,364 shares of Woori Bank s common stock (representing 2.94% of its outstanding common stock). As a result of such transactions, the KDIC s ownership interest in Woori Bank was reduced to 18.43%. In connection with our establishment in January 2019 as a new financial holding company pursuant to a comprehensive stock transfer under Korean law, the KDIC received our common stock in exchange for the common stock of Woori Bank it owned, as a result of which the KDIC currently owns 18.32% of our outstanding common stock. We expect that the KDIC will sell all or a portion of such common stock to one or more purchasers in the future.

In December 2016, in connection with the KDIC s sale of shares of Woori Bank s common stock, Woori Bank entered into an agreement with the KDIC, pursuant to which Woori Bank was required to use its best efforts to cause an employee of the KDIC nominated by it to be appointed as Woori Bank s non-standing director, so long as the KDIC either (x) owned 10% or more of Woori Bank s total issued shares with voting rights or (y) owned more than 4% but less than 10% of Woori Bank s total issued shares with voting rights and remained its largest shareholder (other than the National Pension Service of Korea). While such agreement with Woori Bank has expired, we expect to enter into an agreement with similar terms with the KDIC in the first half of 2019. See Item 10.C. Material Contracts.

Establishment of Woori Financial Group

We were established as a new financial holding company on January 11, 2019 pursuant to a comprehensive stock transfer under Korean law, whereby holders of the common stock of Woori Bank and certain of its subsidiaries transferred all of their shares to us and in return received shares of our common stock. The stock transfer was approved by the shareholders of Woori Bank at an extraordinary general meeting held on December 28, 2018. In the stock transfer, each holder of one share of Woori Bank s common stock recorded in its shareholder register as of November 15, 2018 received one share of our common stock. In addition, we issued our common stock to Woori Bank in exchange for the outstanding common stock of certain of Woori Bank s wholly-owned subsidiaries that became our wholly-owned direct subsidiaries. Specifically, in connection with the stock transfer, Woori Bank transferred all shares of common stock held by it of Woori FIS Co., Ltd., Woori Finance Research Institute Co., Ltd., Woori Credit Information Co., Ltd., Woori Fund Services Co., Ltd. and Woori Private Equity Asset Management Co., Ltd., all of which were Woori Bank s wholly-owned subsidiaries, to us and, as consideration for such transferred shares, received shares of our common stock in accordance with the specified stock transfer ratio applicable to each such subsidiary. Following the completion of the stock transfer, Woori Bank, Woori FIS Co., Ltd., Woori Finance Research Institute Co., Ltd., Woori Credit Information Co., Ltd., Woori Fund Services Co., Ltd. and Woori Private Equity Asset Management Co., Ltd. became our direct and wholly-owned subsidiaries.

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The following chart illustrates the organizational structure of Woori Bank prior to the completion of the stock transfer:

The following chart illustrates our organizational structure after the completion of the stock transfer:

In connection with the stock transfer, Woori Bank s common stock was suspended from trading from January 9, 2019 and was de-listed from the KRX KOSPI Market on February 13, 2019. Following the stock transfer, our common stock was newly listed on the KRX KOSPI Market on February 13, 2019, and our ADSs succeeded to the listing of Woori Bank s ADSs on the New York Stock Exchange on January 11, 2019.

The shareholders of Woori Bank were entitled to exercise appraisal rights with respect to its common stock held by them at a purchase price of 16,079 per share, in accordance with Korean law. The period for exercise of appraisal rights started on December 28, 2018 and ended on January 7, 2019, during which shareholders exercised appraisal rights with respect to an aggregate of 11,453,702 shares of common stock of Woori Bank. The payment of the purchase price for such common stock held by the exercising shareholders was made on January 9, 2019, in the aggregate amount of 184 billion. As a result of the exchange for our common stock of such treasury shares obtained by Woori Bank pursuant to the exercise of appraisal rights by its shareholders and other treasury shares it held, as well as the transfer by Woori Bank of the shares it held in its relevant subsidiaries to us, Woori Bank received 18,346,782 shares of our common stock in the stock transfer, which constituted our treasury shares and represented 2.7% of our total issued common stock as of January 11, 2019. In March 2019, Woori Bank sold all such shares to institutional investors in a block trade, and we no longer hold any treasury shares as of the date of this annual report.

Item 4.B. *Business Overview*

We are one of the largest financial holding companies in Korea, in terms of consolidated total assets, and our operations include Woori Bank, one of the largest commercial banks in Korea. Our subsidiaries collectively engage in a broad range of businesses, including corporate banking, consumer banking, credit card operations, investment banking, capital markets activities and other businesses. We provide a wide range of products and services to our customers, which mainly comprise small- and medium-sized enterprises and individuals, as well as some of Korea s largest corporations. As of December 31, 2018, we had, on a consolidated basis, total assets of 340,447 billion, total liabilities of 318,494 billion and total equity of 21,953 billion.

As one of the leading financial services groups in Korea, we believe our core competitive strengths include the following:

Strong and long standing relationships with corporate customers. Historically our operations concentrated on large corporate customers. As a result, we believe that we have strong relationships with many of Korea s leading corporate groups, and we are the main creditor bank to 10 of the 31 largest Korean corporate borrowers. Further enhancing our corporate loan portfolio is our ability to lend to small- and medium-sized enterprise customers. As of December 31, 2018, we had approximately 306,424 small- and medium-sized enterprise borrowers.

Large and loyal retail customer base. With respect to our consumer banking operations, we have the third-largest deposit base among Korean commercial banks, and over 23.0 million retail customers, representing about half of the Korean adult population. Of these customers, over 9.4 million are active customers, meaning that they have a deposit account with us with a balance of at least 300,000 or have a loan account with us.

Extensive distribution and marketing network. We serve our customers primarily through one of the largest banking networks in Korea, comprising 877 branches and 5,376 ATMs and cash dispensers as of December 31, 2018. Through Woori Bank, we also operate 11 dedicated corporate banking centers and 92 general managers for our large corporate customers and 992 relationship managers stationed at 728 branches (as well as 804 additional non-stationed employees who serve as relationship managers as needed) for our small- and medium-sized enterprise customers as of December 31, 2018. In addition, we have Internet and mobile banking platforms to enhance customer convenience, reduce service delivery costs and allow our branch staff to focus on marketing and sales.

Strong capital base. As of December 31, 2018, Woori Bank s consolidated equity totaled 22.0 trillion, and Woori Bank s total capital adequacy ratio was 15.65%. Our management team at the holding company carefully coordinates the capital and dividend plans of each of our subsidiaries and for the consolidated group to ensure that we optimize our capital position. We believe our strong capital base and coordinated capital management enable us to support growth of our core businesses and to pursue franchise-enhancing initiatives such as selective investments and acquisitions.

Strong and experienced management team. We benefit from our management team s extensive experience accumulated with our subsidiaries and their predecessors. In January 2019, Tae-Seung Sohn, the president and chief executive officer of Woori Bank, concurrently assumed the role of our representative director, president and chief executive officer, which we believe will enhance the quality of our management team and our corporate governance. We also believe that the extensive experience of many members of our management team in the financial sector will help us to continue to strengthen our operations.

Strategy

We aim to continue to build our position as a leading universal banking and financial services provider in Korea, with a view to having our business platform and operating structure on par with those of leading global financial institutions. The key elements of our strategy are as follows:

Provide comprehensive financial services and maximize synergies among our subsidiaries through our financial holding company structure. We plan to become a comprehensive financial services provider capable of developing and cross-selling a diverse range of products and services to our large existing base of retail and corporate banking customers, so that we can more effectively compete with leading domestic and international financial institutions. We believe that the adoption of a financial holding company structure will help us increase customer satisfaction, generate synergies and maximize profitability, by creating an integrated system among our affiliated companies and allowing us to effectively provide various financial services, including comprehensive one-stop asset management services customized for clients, based on active expansion of non-banking and global business operations. One of the intended benefits of our financial holding company structure is that it enhances our ability to engage in mergers and acquisitions which we may decide to pursue as part of our strategy. Accordingly, we may consider acquiring or merging with other financial institutions, particularly in the non-banking sector, to achieve more balanced growth and further diversify our revenue base.

In addition, we believe our financial holding company structure gives us a competitive advantage over stand-alone banks and other financial institutions by:

- allowing us to offer a more extensive range of financial products and services;
- enabling us to share customer information, which is not permitted outside a financial holding company structure, thereby enhancing our risk management and cross-selling capabilities;
- enhancing our ability to reduce costs in areas such as back-office processing and procurement;
- enabling us to raise and manage capital on a centralized basis.

Further improve our asset quality and strengthen our risk management practices. We were one of the earliest and most aggressive banks in Korea to actively reduce non-performing loans through charge-offs and sales to third parties, and we have taken various measures to facilitate the disposal of our substandard or below loans. As a result of these and other initiatives, our ratio of non-performing loans to total loans has been declining and was 0.51% as of December 31, 2018.

One of our highest priorities is to maintain our strong asset quality and enhance our risk management practices on an ongoing basis. We have created a centralized group-wide risk management organization, installed a comprehensive warning and monitoring system, adopted uniform loan loss provisioning policies across all subsidiaries and implemented an advanced credit evaluation system called CREPIA at Woori Bank. We plan to undertake a series of group-wide reviews of our credit risk management procedures, as well as our risk management infrastructure, in order to develop and implement various measures to further standardize and improve our risk management procedures and systems.

In addition, we use a value at risk, or VaR, monitoring system for managing market risk. We intend to vigorously maintain a manageable risk profile and balance that risk profile with adequate returns. We believe that our continuous focus on upgrading our risk management systems and practices will enable us to maintain our strong asset quality, improve our financial performance and enhance our competitiveness.

Enhance customer profitability through optimization of channel usage, products and services for each customer segment. Our extensive distribution network and wide range of quality products and services has enabled us to serve our customers effectively. However, we intend to further enhance the value proposition to our customers by differentiating products and delivery channels based on the distinct needs of different customer segments.

Retail customers. We have segmented our retail customers into four groups: high net worth; mass affluent; middle class; and mass market. We believe we are relatively competitive in our core customer base, which includes mass affluent and middle class customers, and we serve these customers via our team of financial planners in our branches who sell customized higher margin services and products, such as investment advice, mutual funds, insurance and personal loans. For our mass market customers, we offer simple, easy-to-understand and relatively more standardized products such as basic deposit and lending products, including mortgage loans, and we encourage the use of alternative distribution channels such as the Internet, mobile banking and ATMs by our mass market customers such that we can serve them in a cost efficient manner. We serve our high net worth individuals via branches and dedicated private banking centers staffed with experienced private bankers who offer sophisticated tailored financial services.

Corporate customers. We continuously and vigorously review our portfolio of large corporate and small- and medium-sized enterprise customers to refine our database of core accounts and industries in terms of profitability potential. We seek to expand our relationship beyond a pure lending relationship by promoting our foreign exchange, factoring, trade finance and investment banking services to our core small- and medium-sized enterprise customers and cross-selling our investment banking services, derivatives and other risk hedging products, as well as employee retirement products, to our core large corporate customers.

Diversify our revenue base with a view to reducing our exposure to interest rate cycles and increasing profitability. Currently, in line with the Korean banking industry, we derive a substantial majority of our revenues from our loan and other credit products. To reduce our traditional reliance on lending as a source of revenue and to increase our profitability, we have been seeking to further diversify our earnings base, in particular by focusing on fee-based services, such as foreign exchange, trade finance and derivatives products, investment banking and advisory investment trust services for our corporate customers and asset management and mutual funds, investment trust products and beneficiary certificates, and life and non-life insurance products for our retail customers.

In addition, we intend to continue to enter into business alliances with other leading financial service providers so that we can offer a full range of best of class products and services to our targeted customers. We actively evaluate alliances and joint venture opportunities when they arise in order to diversify our revenue stream and provide our customers with a range of sophisticated and tailored products that will complement our existing products and services. We also intend to carefully consider potential acquisitions or other strategic investments that fit within our overall strategy. When considering acquisitions, we will focus on opportunities that supplement the range of products and services we offer and strengthen our existing customer base, enable us to maintain our standard for asset quality and profitability and provide us with a reasonable return on our investment.

Increase fintech capabilities. We have been enhancing our financial technology, or fintech, capabilities in order to expand our non-traditional financial service delivery channels for our customers. We have established a mobile financial service platform through the launch of the first mobile-only banking service in Korea called WiBee Bank in May 2015 and the additions of a mobile messenger application called WiBee Talk and a comprehensive membership point service called WiBee Members in January and July 2016, respectively. In addition, in April 2017, K bank, formed by a consortium with KT Corporation and 20 other companies, in which we, through Woori Bank, own 13.8% of the equity with voting rights, launched its services to become the first Internet-only bank in Korea. K bank also offers its services through convenience stores and phone booths in addition to our ATMs.

We have also strengthened our alliances with information technology companies to provide innovative electronic payment methods, including Woori Samsung Pay with Samsung Electronics, which is a cardless ATM withdrawal system that utilizes smartphones. In August 2016, we commenced iris-scanning authentication at certain of our ATMs, which allows for cardless ATM withdrawals.

Expand presence in the global market. We have continuously expanded our overseas operations since our establishment of the first overseas branch of a Korean commercial bank in Tokyo in 1968. In December 2014, we became the first Korean bank to be involved in a merger with a listed overseas bank when our subsidiary PT. Bank Woori Indonesia merged with and into PT. Bank Himpunan Saudara 1906, which was renamed PT Bank Woori Saudara Indonesia 1906, Tbk. In October 2016, we acquired a 51% equity interest in Wealth Development Bank Corp., a thrift bank in the Philippines, and have partnered with Vicsal Development Corporation, an operator of department stores and supermarkets in the Philippines and another major shareholder of Wealth Development Bank Corp., to actively expand our base of local customers. In addition, in November 2016, we established a local subsidiary in Vietnam, Woori Bank Vietnam, which manages the local operations of our branches in Vietnam. In 2017, we expanded the scope of our operations in Myanmar, Indonesia, Cambodia and the Philippines in order to capitalize on the potential for high growth and profitability in Southeast Asia and established a representative office in Poland as well as branches in India. In 2018, we acquired VisionFund (Cambodia) Ltd., a microfinance lender in Cambodia, and established a German subsidiary, Woori Bank Europe GmbH, which is headquartered in Frankfurt, as a result of which we have a presence in 26 countries with 430 branches and offices outside Korea.

Develop and increase productivity of our professional workforce. We aim to retain the most qualified and highly-trained professionals in the market, and we intend to continue to focus on the development and training of our core professionals. In order to boost employee morale and productivity, we aim to create an environment that nurtures development and growth and accordingly have implemented performance-based incentive programs to recognize high performers on both an individual and business group level. In addition, a rigorous ethics management program and related measures have been instituted to reduce operational risk and help ensure compliance with our internal standards and policies.

Corporate Banking

We provide commercial banking services to large corporate customers (including government-owned enterprises) and small- and medium-sized enterprises in Korea. Currently, our corporate banking operations consist mainly of lending to and taking deposits from our corporate customers. We also provide ancillary services on a fee basis, such as inter-account transfers, transfers of funds from branches and agencies of a company to its headquarters and transfers of funds from a company s customer accounts to the company s main account. We provide our corporate banking services predominantly through Woori Bank.

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The following table sets forth the balances and percentages of our total lending and total deposits represented by our large corporate and small- and medium-sized enterprise customer loans and deposits, respectively, and the number of such customers as of the dates indicated:

	As of December 31,					
	2016		2017		2018	
	Amount	% of Total	Amount	% of Total	Amount	% of Total
	(in billions of Won, except percentages)					
Loans[1]:						
Small- and medium-sized enterprise[2]	68,434	28.9%	74,906	29.6%	79,371	30.3%
Large corporate[3]	36,176	15.3	43,372	17.2	38,256	14.6
Others[4]	21,033	8.9	18,398	7.3	19,260	7.4
Total	125,643	53.1%	136,676	54.1%	136,887	52.2%
Deposits:						
Small- and medium-sized enterprise	39,564	17.9%	42,693	18.2%	46,753	18.8%
Large corporate	62,899	28.5	68,340	29.1	75,128	30.2
Total	102,463	46.4%	111,033	47.3%	121,881	49.0%
Number of borrowers:						
Small- and medium-sized enterprise	262,311		280,129		306,424	
Large corporate	3,771		4,169		5,389	

(1) Not including due from banks, other financial assets (or other receivables) and outstanding credit card balances, and prior to deducting allowance for credit losses and present value discount or reflecting deferred origination costs.

(2) Loans to small- and medium-sized enterprises as defined in the Framework Act on Small and Medium Enterprises of Korea and related regulations (and including project finance loans to such enterprises). See Small- and Medium-Sized Enterprise Banking.

(3) Loans to companies that are not small- and medium-size enterprises as defined in the Framework Act on Small and Medium Enterprises of Korea and related regulations, and typically including companies that have assets of 12 billion or more and are therefore subject to external audit under the Act on External Audits of Stock Companies. See Large Corporate Banking.

(4) Includes loans to governmental agencies, foreign loans and other corporate loans.

Corporate loans we provide consist principally of the following:

working capital loans, which are loans used for general working capital purposes, typically with a maturity of one year or less, including notes discounted and trade finance; and *facilities loans*, which are loans to finance the purchase of materials, equipment and facilities, typically with a maturity of three years or more.

On the deposit-taking side, we currently offer our corporate customers several types of corporate deposit products. These products can be divided into two general categories: demand deposits that have no restrictions on deposits or withdrawals, but which offer a relatively low interest rate; and time deposits from which withdrawals are restricted for a period of time, but offer higher interest rates. We also offer installment deposits, certificates of deposit and repurchase instruments. We offer varying interest rates on our deposit products depending upon the rate of return on our income-earning assets, average funding costs and interest rates offered by other nationwide commercial banks.

Small- and Medium-Sized Enterprise Banking

We use the term small- and medium-sized enterprises as defined in the Framework Act on Small and Medium Enterprises of Korea and related regulations. Under the Framework Act on Small and Medium Enterprises of Korea and related regulations, 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 average or annual sales revenue standards prescribed by the Enforcement Decree of the Framework Act on Small and Medium Enterprises that are applicable to the enterprise s primary business, and (iii) the enterprise must meet the standards of management independence from ownership as prescribed by the Enforcement Decree of the Framework Act on Small and Medium Enterprises, including non-membership in a conglomerate as defined in the Monopoly Regulations and Fair Trade Act. Furthermore, certified social enterprises (as defined in the Social Enterprise Promotion Act of Korea), cooperatives, federations of cooperatives, social cooperatives and federations of social cooperatives (as defined in the Framework Act on Cooperatives), as well as cooperatives, federations and national federations (as defined in the Consumer Cooperatives Act) that satisfy the requirements prescribed by the Framework Act on Small and Medium Enterprises, may also qualify as small- and medium-sized enterprises. The small- and medium-sized enterprise segment of the corporate banking market has grown significantly in recent years, including as a result of government measures to encourage lending to these enterprises. As of December 31, 2018, 24.4% of our small- and medium-sized enterprise loans were extended to borrowers in the manufacturing industry, 15.8% were extended to borrowers in the retail and wholesale industry, and 7.4% were extended to borrowers in the hotel, leisure and transportation industries.

We service our small- and medium-sized enterprise customers primarily through Woori Bank s network of branches and small- and medium-sized enterprise relationship managers. As of December 31, 2018, Woori Bank had stationed one or more relationship managers at 728 branches, of which 369 were located in the Seoul metropolitan area. The relationship managers specialize in servicing the banking needs of small- and medium-sized enterprise customers and concentrate their marketing efforts on developing new customers in this segment. As of December 31, 2018, Woori Bank had a total of 992 small- and medium-sized enterprise relationship managers stationed at its branches (as well as 804 non-stationed employees who serve as relationship managers as needed).

In addition to increasing our dedicated staffing and branches, our strategy for this banking segment is to identify promising industry sectors and to develop and market products and services targeted towards customers in these sectors. We have also developed in-house industry specialists who can help us identify leading small- and medium-sized enterprises in, and develop products and marketing strategies for, these targeted industries. In addition, we operate customer loyalty programs at Woori Bank for our most profitable small- and medium-sized enterprise customers and provide them with benefits and services such as preferential rates, free seminars and workshops and complementary invitations to cultural events.

Lending Activities. We provide both working capital loans and facilities loans to our small- and medium-sized enterprise customers. As of December 31, 2018, working capital loans and facilities loans accounted for 44.3% and 52.3%, respectively, of our total small- and medium-sized enterprise loans. As of December 31, 2018, we had approximately 306,424 small- and medium-sized enterprise borrowers.

As of December 31, 2018, secured loans and loans guaranteed by a third party accounted for 70.1% and 5.6%, respectively, of our small- and medium-sized enterprise loans. As of December 31, 2018, approximately 78.6% of the secured loans were secured by real estate and 1.2% were secured by deposits. Working capital loans generally have a maturity of one year, but may be extended on an annual basis for an aggregate term of three to five years if periodic payments are made. Facilities loans have a maximum maturity of 10 years.

When evaluating the extension of working capital loans and facilities loans, we review the creditworthiness and capability to generate cash of the small- and medium-sized enterprise customer. Furthermore, we take corporate guarantees and credit guarantee letters from other financial institutions and use deposits that the borrower has with us or securities pledged to us as collateral.

The value of any collateral is defined using a formula that takes into account the appraised value of the property, any prior liens or other claims against the property and an adjustment factor based on a number of considerations including, with respect to property, the value of any nearby property sold in a court-supervised auction during the previous five years. We generally revalue any collateral on a periodic basis (every year for real estate (with apartments being revalued every month, subject to the availability of certain specified market value information), every year for equipment, every month for deposits and every week for stocks listed on a major Korean stock exchange) or if a trigger event occurs with respect to the loan in question.

Pricing. We establish the pricing for our small- and medium-sized enterprise loan products based principally on transaction risk, our cost of funding and market considerations. Our lending rates are generally determined using our CREPIA system. We use our CREPIA system to manage our lending activities, and input data gathered from loan application forms, credit scores of borrowers and the appraisal value of collateral provided by external valuation experts into the CREPIA system and update such information periodically to reflect changes in such information. See Item 11. Quantitative and Qualitative Disclosures about Market Risk Credit Risk Management Credit Evaluation and Approval. We measure transaction risk using factors such as the credit rating assigned to a particular borrower and the value and type of collateral. Our system also takes into account cost factors such as the current market interest rate, opportunity cost and cost of capital, as well as a spread calculated to achieve a target rate of return. Depending on the price and other terms set by competing banks for similar borrowers, we may reduce the interest rate we charge to compete more effectively with other banks. Loan officers have limited discretion in deciding what interest rates to offer, and significant variations require review at higher levels. As of December 31, 2018, approximately 74.1% of our small- and medium-sized enterprise loans had interest rates that varied with reference to current market interest rates.

Large Corporate Banking

Our large corporate customers consist of companies that are not small- and medium-size enterprises as defined in the Framework Act on Small and Medium Enterprises of Korea and related regulations, and typically include companies that have assets of 12 billion or more and are therefore subject to external audit under the Act on External Audits of Stock Companies. As a result of our history and development, particularly the history of Woori Bank, we remain the main creditor bank to many of Korea s largest corporate borrowers.

In terms of our outstanding loan balance, as of December 31, 2018, 37.6% of our large corporate loans were extended to borrowers in the manufacturing industry, 34.9% were extended to borrowers in the finance and insurance industry, and 8.0% were extended to borrowers in the retail and wholesale industry.

We service our large corporate customers primarily through Woori Bank s network of dedicated corporate banking centers and general managers. Woori Bank operates 11 dedicated corporate banking centers, all of which are located in the Seoul metropolitan area. Each center is staffed with one or more general managers, and certain centers are headed by a senior general manager. Depending on the center, each such manager is responsible for large corporate customers that either are affiliates of a particular *chaebol* or operate in a particular industry or region. As of December 31, 2018, Woori Bank had a total of 92 general managers who focus on marketing to and managing the accounts of large corporate customers.

Our strategy for the large corporate banking segment is to develop new products and cross-sell our existing products and services to our core base of large corporate customers. In particular, we continue to focus on marketing fee-based products and services such as foreign exchange and trade finance services, derivatives and other risk hedging products, investment banking services and advisory services. We have also been reviewing the credit and risk profiles of our existing customers as well as those of our competitors, with a view to identifying a target group of high-quality customers on whom we can concentrate our marketing efforts. In addition, we are seeking to continue to increase the *chaebol*-, region- and industry-based specialization of the managers at our dedicated corporate banking centers, including through the operation of a knowledge management database that allows greater sharing of marketing techniques and skills.

Lending Activities. We provide both working capital loans and facilities loans to our large corporate customers. As of December 31, 2018, working capital loans (including domestic usance, bills bought and securities sold under repurchase agreements) and facilities loans accounted for 75.7% and 14.3%, respectively, of our total large corporate loans.

Loans to large corporate customers may be secured by real estate or deposits or be unsecured. As of December 31, 2018, secured loans and loans guaranteed by a third party accounted for 14.2% and 4.6%, respectively, of our large corporate loans. Since a relatively low percentage of our large corporate loan portfolio is secured by collateral, we may be required to establish larger allowances for credit losses with respect to any such loans that become non-performing or impaired. See Assets and Liabilities Asset Quality of Loans

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Loan Loss Provisioning Policy. As of December 31, 2018, approximately 62.0% of the secured loans were secured by real estate and approximately 3.8% were secured by deposits. Working capital loans generally have a maturity of one year but may be extended on an annual basis for an aggregate term of three to five years. Facilities loans have a maximum maturity of 10 years.

We evaluate creditworthiness and collateral for our loans to large corporate customers in essentially the same way as we do for loans to small- and medium-sized enterprise customers. See Corporate Banking Small- and Medium-Sized Enterprise Banking Lending Activities.

Pricing. We determine the pricing of our loans to large corporate customers in the same way that we determine the pricing of our loans to small- and medium-sized enterprise customers. See Corporate Banking Small- and Medium-Sized Enterprise Banking Pricing. As of December 31, 2018, approximately 88.6% of these loans had interest rates that varied with reference to current market interest rates.

Consumer Banking

We provide retail banking services to consumers in Korea. Our consumer banking operations consist mainly of lending to and taking deposits from our retail customers. We also provide ancillary services on a fee basis, such as wire transfers. While we have historically attracted and held large amounts of consumer deposits through our extensive branch network, our substantial consumer lending growth occurred principally in recent years, in line with the increase in the overall level of consumer debt in Korea. We provide our consumer banking services primarily through Woori Bank. See Branch Network and Other Distribution Channels.

We classify our consumer banking customers based on their individual net worth and contribution to our consumer banking operations into four groups: high net worth; mass affluent; middle class; and mass market. We differentiate our products, services and service delivery channels with respect to these segments and target our marketing and cross-selling efforts based on this segmentation. With respect to the high net worth and mass affluent segments, we have established private banking operations to better service customers in these segments. See Private Banking Operations. With respect to the middle class segment, we seek to use our branch-level sales staff to maximize the overall volume of products and services we provide. With respect to the mass market segment, we have focused on increasing our operating efficiency by encouraging customers to migrate to low-cost alternative service delivery channels, such as the Internet, call centers, mobile banking and ATMs.

Lending Activities

We offer a variety of consumer loan products to households and individuals. We differentiate our product offerings based on a number of factors, including the customer s age group, the purpose for which the loan is used, collateral requirements and maturity. The following table sets forth the balances and percentage of our total lending represented by our consumer loans as of the dates indicated:

	As of December 31,					
	2016		2017		2018	
	Amount(1)	% of Total Loans(2)	Amount(1)	% of Total Loans(2)	Amount(1)	% of Total Loans(2)
	(in billions of Won, except percentage)					
	32,368	13.7%	36,301	14.4%	39,492	15.1%

General purpose household loans						
Mortgage loans	47,630	20.1	47,476	18.8	51,280	19.6
Home equity loans	24,486	10.3	25,513	10.1	26,324	10.0
Total	104,484	44.1%	109,290	43.2%	117,096	44.7%

(1) Not including outstanding credit card balances, and prior to deducting allowance for credit losses and present value discount or reflecting deferred origination costs.

(2) Total loans do not include other financial assets (or other receivables) and are before the deduction of allowance for credit losses and present value discount and the reflection of deferred origination costs.

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Our consumer loans consist of:

general purpose household loans, which are loans made to customers for any purpose (other than mortgage and home equity loans), and include overdraft loans, which are loans extended to customers to cover insufficient funds when they withdraw funds from their demand deposit accounts with us in excess of the amount in such accounts up to a limit established by us; and

mortgage loans, which are loans made to customers to finance home purchases, construction, improvements or rentals, and *home equity loans*, which are loans made to customers secured by their homes to ensure loan repayment.

For secured loans, including mortgage and home equity loans, we generally lend up to 70% of the collateral value (except in areas of high speculation designated by the government where we generally limit our lending to 40% of the appraised value of collateral) minus the value of any lien or other security interest that is prior to our security interest. In calculating the collateral value for real estate for such secured consumer loans (which principally consists of residential properties), we generally use the fair value of the collateral as appraised by Korea Investors Service which is collated in our CREPIA system. We generally revalue collateral on a periodic basis. As of December 31, 2018, the revaluation frequency was every year for real estate (with apartments being revalued every month, subject to the availability of certain specified market value information), every year for equipment, every month for deposits and every week for stocks listed on a major Korean stock exchange.

A borrower s eligibility for general purpose household loans is primarily determined by such borrower s creditworthiness. In reviewing a potential borrower s loan application, we also consider the suitability of the borrower s proposed use of funds, as well as the borrower s ability to provide a first-priority mortgage. A borrower s eligibility for a home equity loan is primarily determined by such borrower s creditworthiness (including as determined by our internal credit scoring protocols) and the value of the collateral property, as well as any third party guarantees of the borrowed amounts.

We also offer a variety of collective housing loans, including loans to purchase property or finance the construction of housing units, loans to contractors to be used for working capital purposes, and loans to educational institutions and non-profit entities to finance the construction of dormitories. Collective housing loans subject us to the risk that the housing units will not be sold. As a result, we review the probability of the sale of the housing unit when evaluating the extension of a loan. We also review the borrower s creditworthiness and the suitability of the borrower s proposed use of funds. Furthermore, we take a lien on the land on which the housing unit is to be constructed as collateral. If the collateral is not sufficient to cover the loan, we also take a guarantee from the Housing Finance Credit Guarantee Fund as security.

General Purpose Household Loans

Our general purpose household loans may be secured by real estate (other than homes), deposits or securities. As of December 31, 2018, approximately 29,285 billion, or 74.2%, of our general purpose household loans were unsecured, although some of these loans were guaranteed by a third party. Overdraft loans are primarily unsecured and typically have a maturity between one and three years, and the amount of such loans has been steadily declining. As of December 31, 2018, this amount was approximately 28 million.

Pricing. The interest rates on our general purpose household loans are either a periodic floating rate (which is based on a base rate determined for three-month, six-month or twelve-month periods, further adjusted to account for the borrower s credit score and our opportunity cost) or a fixed rate that reflects our internal cost of funding and similar adjustments, but taking into account interest rate risks. In 2010, we began using the Cost of Fund Index (or COFIX) benchmark rate, as announced by the Korea Federation of Banks, as the base rate for our general purpose household loans with periodic floating rates in place of the benchmark certificate of deposit rate that we had traditionally used for such purpose.

Our interest rates also incorporate a margin based on, among other things, the type of collateral (if any), priority with respect to any security, our target loan-to-value ratio and loan duration. We also can adjust the applicable rate based on current or expected profit contribution of the customer. Our lending rates are generally determined by our CREPIA system. The applicable interest rate is determined at the time of the drawdown of the loan. We also charge a termination fee in the event a borrower repays the loan prior to maturity. As of December 31, 2018, approximately 62.6% of our general purpose household loans had floating interest rates.

Mortgage and Home Equity Lending

We provide customers with a number of mortgage and home equity loan products that have flexible features, including terms, repayment schedules, amounts and eligibility for loans. The maximum term of our mortgage and home equity loans is typically 35 years. Most of our mortgage and home equity loans provided prior to January 2016 have an interest-only payment period of 10 years or less. However, the Korea Federation of Banks implementation of its Guidelines on Banks Mortgage Loan Screening changed the default interest-only payment period to one year or less, which applies to loans that were originated subsequent to the effective date of the Guidelines in January 2016. With respect to mortgage and home equity loans, we determine the eligibility of borrowers based on the borrower s personal information, transaction history and credit history using our CREPIA system. See Item 11. Quantitative and Qualitative Disclosures about Market Risk Credit Risk Management Credit Evaluation and Approval. The eligibility of a borrower that is participating in a housing lottery will depend on proof that it has paid a deposit or can obtain a guarantee from a Korean government-related housing fund.

As of December 31, 2018, approximately 63.9% of our mortgage and home equity loans were secured by residential or other property, 26.0% of our mortgage and home equity loans were guaranteed by Korean government-related housing funds and 5.4% of our mortgage and home equity loans, contrary to general practices in the United States, were unsecured (although the use of proceeds from mortgage and home equity loans is restricted for the purpose of financing home purchases and some of these loans were guaranteed by a third party). One reason that a portion of our mortgage and home equity loans are unsecured is that we, along with other Korean banks, provide advance loans to borrowers for the down payment of new housing (particularly apartments) that is in the process of being built. Once construction is completed, which may take several years, these mortgage and home equity loans become secured by the new housing purchased by these borrowers. As of December 31, 2018, we had issued unsecured construction loans relating to housing where construction was not completed in the amount of 4,200 billion. For the year ended December 31, 2018, the average initial loan-to-value ratio of our mortgage loans and home equity loans was approximately 55.5% and 45.8%, respectively, compared to 59.1% and 51.5% for the year ended December 31, 2017. The average loan-to-value ratio of our mortgage loans and home equity loans as of December 31, 2018 was approximately 52.9% and 47.3%, respectively, compared to 55.6% and 50.4% as of December 31, 2017.

Pricing. The interest rates for our mortgage and home equity loans are determined on essentially the same basis as our general purpose household loans, except that for mortgage and home equity loans we place significantly greater weight on the value of any collateral that is being provided to secure the loan. The base rate we use in determining the interest rate for our mortgage and home equity loans is identical to the base rate we use to determine pricing for our general purpose household loans. As of December 31, 2018, approximately 55.6% of our outstanding mortgage and home equity loans had floating interest rates.

Private Banking Operations

Our private banking operations within Woori Bank aim to service our high net worth and mass affluent retail customers. As of December 31, 2018, we had over 192,000 customers who qualified for private banking services, representing 0.8% of our total retail customer base. Of the total deposits of our retail unit of 90.7 trillion as of December 31, 2018, high net worth and mass affluent customers accounted for 62.2%.

Through our private bankers, we provide financial and real estate advisory services to our high net worth and mass affluent customers. We also market differentiated investment and banking products and services to these segments, including beneficiary certificates, overseas mutual fund products, specialized bank accounts and credit cards. In addition, we have developed a customer loyalty program for our private banking customers that provides preferential rate and fee benefits and awards. We have also segmented our private banking operations by introducing exclusive private client services for high net worth customers who individually maintain a deposit balance of at least 100 million. We believe that our private banking operations will allow us to increase our revenues from our existing high net worth and mass affluent customers, as well as attract new customers in these segments.

We have 723 branches that offer private banking services. These branches are staffed by 744 private bankers, and almost all of the branches are located in metropolitan areas, including Seoul.

We also operate an advisory center in Seoul for its private banking clients, which employs 18 specialists advising on matters of law, tax, real estate, risk assessment and investments.

Deposit-Taking Activities

We are one of the largest deposit holders among Korean banks, in large part due to our nation-wide branch network. The balance of our deposits from retail customers was 80,655 billion as of December 31, 2016, 95,757 billion as of December 31, 2017 and 95,146 billion as of December 31, 2018 which constituted 36.5%, 40.8% and 38.2%, respectively, of the balance of our total deposits.

We offer diversified deposit products that target different customers with different needs and characteristics. These deposit products fall into five general categories:

demand deposits, which either do not accrue interest or accrue interest at a lower rate than time, installment or savings deposits. The customer may deposit and withdraw funds at any time and, if the deposits are interest-bearing, they accrue interest at a fixed or variable rate depending on the period and/or amount of deposit;

time deposits, which generally require a customer to maintain a deposit for a fixed term during which interest accrues at a fixed or floating rate. Early withdrawals require penalty payments. The term for time deposits typically ranges from one month to five years;

savings deposits, which allow the customer to deposit and withdraw funds at any time and accrue interest at a fixed rate set by us depending upon the period and amount of deposit;

installment deposits, which generally require the customer to make periodic deposits of a fixed amount over a fixed term during which interest accrues at a fixed rate. Early withdrawals require penalty payment. The term for installment deposits range from six months to five years; and

certificates of deposit, the maturities of which range from 30 days to five years, with a required minimum deposit of 10 million. Interest rates on certificates of deposit vary with the length of deposit and prevailing market rates. Certificates of deposit may be sold at face value or at a discount with the face amount payable at maturity.

The following table sets forth the percentage of our total retail and corporate deposits represented by each deposit product category as of December 31, 2018:

Demand Deposits	Time Deposits	Savings Deposits	Installment Deposits	Certificates of Deposit
9.70%	54.38%	33.29%	0.01%	2.62%

We offer varying interest rates on our deposit products depending on market interest rates as reflected in average funding costs, the rate of return on our interest-earning assets and the interest rates offered by other commercial banks. Generally, the interest payable is the highest on installment deposits and decreases with certificate of deposit accounts and time deposits and savings deposit accounts receiving relatively less interest, and demand deposits accruing little or no interest.

We also offer deposits in foreign currencies and a specialized deposit product, the apartment application comprehensive deposit, which is a monthly installment comprehensive savings program providing the holder with a preferential right to subscribe for new national housing units constructed under the Housing Act or new privately constructed housing units. This deposit product requires monthly installments of 20,000 to 500,000, terminates when the holder is selected as a subscriber for a housing unit and accrues interest at variable rates depending on the term.

The Monetary Policy Committee of the Bank of Korea imposes a reserve requirement on Won currency deposits of commercial banks based generally on the type of deposit instrument. The minimum reserve requirement ratio is 7%. See Supervision and Regulation Principal Regulations Applicable to Banks Liquidity. Ongoing regulatory reforms have removed all controls on lending rates and deposit rates (except for the prohibition on interest payments on current account deposits).

The Depositor Protection Act provides for a deposit insurance system where the KDIC guarantees to depositors the repayment of their eligible bank deposits. The deposit insurance system insures up to a total of 50 million per depositor per bank. See Supervision and Regulation Principal Regulations Applicable to Banks Deposit Insurance System. We pay a quarterly premium of 0.02% of our average deposits and a quarterly special contribution of 0.025% of our average deposits, in each case for the relevant quarter. For the year ended December 31, 2018, we paid an aggregate of 315 billion of such premiums and contributions.

Branch Network and Other Distribution Channels

We had a total of 877 banking branches in Korea as of December 31, 2018, which was one of the most extensive networks of branches among Korean commercial banks. In recent years, demand in Korea for mutual funds and other asset management products as well as bancassurance products has been rising. These products require an extensive sales force and customer interaction to sell, further emphasizing the need for a large branch network. As a result, an extensive branch network is important to attracting and maintaining retail customers, as they generally conduct a significant portion of their financial transactions through bank branches. We believe that our extensive branch network in Korea helps us to maintain our retail customer base, which in turn provides us with a stable and relatively low cost funding source.

The following table presents the geographical distribution of our banking branch network in Korea as of December 31, 2018:

	Total	
	Number	% of Total
Area		
Seoul	399	46%
Six largest cities (other than Seoul)	150	17
Other	328	37
Total	877	100%

In order to maximize access to our products and services, we have established an extensive network of ATMs and cash dispensers, which are located in branches as well as unmanned outlets. We had 5,376 ATMs and cash dispensers as of December 31, 2018.

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We actively promote the use of alternative service delivery channels in order to provide convenient service to customers. We also benefit from customers increasing use of these channels, as they allow us to maximize the marketing and sales functions at the branch level, reduce employee costs and improve profitability. The following tables set forth information, for the periods indicated, relating to the number of transactions and the fee revenue of our alternative service delivery channels.

	For the year ended December 31,		
	2016	2017	2018
ATMs[1]:			
Number of transactions (millions)	346	316	296
Fee income (billions of Won)	40	40	36
Telephone banking:			
Number of users	6,419,017	6,384,164	6,360,743
Number of transactions (millions)	105	104	148
Fee income (billions of Won)	3	3	2
Internet banking:			
Number of users	15,631,766	16,554,353	17,387,658
Number of transactions (millions)	6,994	7,566	7,660
Fee income (billions of Won)	150	160	178

(1) Includes cash dispensers.

Most of our electronic banking transactions do not generate fee income as many of those transactions are free of charge, such as balance inquiries, consultations with customer representatives or transfers of money. This is particularly true for telephone banking services, where a majority of the transactions are balance inquiries or consultations with customer representatives, although other services such as money transfers are also available.

Our automated telephone banking system offers a variety of services, including inter-account fund transfers, balance and transaction inquiries and customer service inquiries. We also operate a call center that handles calls from customers, engages in telemarketing and assists in our collection efforts.

Our Internet banking services include balance and transaction inquiries, money transfers, loan applications, bill payment and foreign exchange transactions. We seek to maintain and increase our Internet banking customer base by focusing largely on our younger customers and those that are able to access the Internet easily (such as office workers) as well as by developing additional Internet-based financial services and products. We also develop new products to target different types of customers with respect to our Internet banking services, and have developed a service that enables private banking customers to access their accounts on a website that provides specialized investment advice. We also offer online escrow services.

In addition, we provide mobile banking services to our customers, which is available to all our Internet-registered users. These services allow our customers to complete selected banking transactions through major Korean telecommunications networks using their smart phones or other mobile devices. In May 2015, we launched the first mobile-only banking service in Korea, called WiBee Bank, and we are expanding its services to Southeast Asia.

We also offer our Win-CMS service to corporate customers of Woori Bank, which provides an integrated electronic cash management system and in-house banking platform for such customers.

Credit Cards

We offer credit card products and services mainly to consumers and corporate customers in Korea. In April 2013, as a part of our strategy to enhance our credit card operations and increase its synergies with our other businesses, Woori Bank effected a horizontal spin-off of its credit card business, and the former credit card business of Woori Bank is operated by its wholly-owned subsidiary, Woori Card. As of December 31, 2018, Woori Card s market share based on transaction volume was approximately 8.5%, which ranked Woori Card as the sixth largest credit card issuer in Korea, according to BC Research, which is a quarterly report issued by BC Card.

Our credit card operations benefit from Woori Card s ownership of a 7.65% equity stake in BC Card. BC Card is co-owned by KT Corporation, which is one of Korea s largest telecommunications companies, and other Korean financial institutions, and operates the largest merchant payment network in Korea as measured by transaction volume. This ownership stake allows us to outsource production and delivery of new credit cards, the preparation of monthly statements, management of merchants and other ancillary services to BC Card for our credit card operations.

Products and Services

We currently have the following principal brands of credit cards outstanding:

- a Woori brand;
- a BC Card brand; and
- a Visa brand.

We issue Visa brand cards under a non-exclusive license agreement with Visa International Service Association and also issue MasterCard, JCB and Union Pay brand cards under a non-exclusive, co-branding agreement with BC Card.

We offer a number of different services to holders of our credit cards. Generally, these services include:

- credit purchase services, which allow cardholders to purchase merchandise or services on credit and repay such credit on a lump-sum or installment basis;
- cash advance services from ATMs and bank branches; and
- credit card loans, which are loans that cardholders can obtain based on streamlined application procedures.

Unlike in the United States and many other countries, where most credit cards are revolving cards that allow outstanding balances to be rolled over from month to month so long as a required minimum percentage is repaid, cardholders in Korea are generally required to pay for their non-installment purchases as well as cash advances within approximately 15 to 60 days of purchase or advance, depending on their payment cycle.

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The following tables set forth certain data relating to the credit card operations of Woori Card (including BC Cards and Visa Cards issued through the BC Card consortium) as of the dates or for the period indicated:

	As of or for the year ended December 31,		
	2016	2017	2018
	(in billions of Won, unless indicated otherwise)		
Number of credit card holders (at year end) (thousands of holders)			
General accounts	12,125	12,509	12,525
Corporate accounts	481	550	460
Total	12,606	13,059	12,985
Active ratio[1]	49.00%	50.70%	52.73%
Credit card interest and fees			
Installment and cash advance interest	236	225	224
Annual membership fees	56	72	78
Merchant fees	831	896	943
Other fees	421	570	606
Total	1,544	1,763	1,851
Charge volumes			
General purchase	59,678	58,454	58,952
Installment purchase	6,231	6,796	8,201
Cash advance	4,620	4,700	4,859
Card loan	2,991	2,944	3,306
Total	73,520	72,894	75,318
Outstanding balances (at year end)			
General purchase	2,580	2,595	3,057
Installment purchase	1,383	1,559	2,089
Cash advance	573	574	607
Card loan	2,146	2,107	2,305
Total	6,682	6,835	8,058
Average outstanding balances			
General purchase	2,591	2,822	3,036
Installment purchase	1,375	1,520	1,911
Cash advance	576	581	596
Card loan	2,047	2,174	2,391
Total	6,589	7,097	7,934

Delinquency ratios[2]			
Less than 1 month	1.37	1.78	1.53
From 1 month to 3 months	0.76	0.72	0.72
From 3 months to 6 months	0.44	0.57	0.64
Over 6 months	0.00	0.00	0.00
Total	2.57%	3.07%	2.89%
Non-performing loan ratio[3]	0.76%	0.83%	0.87%
Gross charge-offs	242	228	242
Recoveries	44	51	57
Net charge-offs	198	177	185
Gross charge-off ratio[4]	3.66%	3.22%	3.04%
Net charge-off ratio[5]	3.00%	2.49%	2.33%

(1) Represents the ratio of accounts used at least once within the past month to total accounts as of the end of the relevant year.

(2) Our delinquency ratios may not fully reflect all delinquent amounts relating to our outstanding balances since a certain portion of delinquent credit card balances (defined as balances one day or more past due) were restructured into loans and were not treated as being delinquent at the time of conversion or for a period of time thereafter. Including all restructured loans, outstanding balances overdue by more than one month accounted for 3.1% of our credit card balances as of December 31, 2018.

(3) Represents the ratio of balances that are more than three months overdue to total outstanding balances as of the end of the relevant year. These ratios do not include the following amounts of previously delinquent credit card balances restructured into loans that were classified as normal or precautionary as of December 31, 2016, 2017 and 2018:

	As of December 31,		
	2016	2017	2018
	(in billions of Won)		
Restructured loans	102	122	137

(4) Represents the ratio of gross charge-offs for the year to average outstanding balances for the year. Our charge-off policy is to charge off balances which are more than six months past due (including previously delinquent credit card balances restructured into loans that are more than six months overdue from the point at which the relevant balances were so restructured), except for those balances with a reasonable probability of recovery.

(5) Represents the ratio of net charge-offs for the year to average outstanding balances for the year.

We offer a diverse range of credit card products within our various brands. Factors that determine which type of card a particular cardholder may receive include net worth, age, location, income level and the particular programs or services that may be associated with a particular card. Targeted products that we offer include:

- cards that offer additional benefits, such as frequent flyer miles and award program points that can be redeemed for services, products or cash;
- gold cards, platinum cards and other preferential members cards that have higher credit limits and provide additional services;
- corporate and affinity cards that are issued to employees or members of particular companies or organizations; and
- revolving credit cards and cards that offer travel services and insurance.

In recent years, credit card issuers in Korea have agreed with selected cardholders to restructure their delinquent credit card account balances as loans that have more gradual repayment terms, in order to retain fundamentally sound customers who are experiencing temporary financial difficulties and to increase the likelihood of eventual recovery on those balances. In line with industry practice, we have restructured a portion of our delinquent credit card account balances as loans. The general qualifications to restructure delinquent credit card balances as loans are that the delinquent amount be more than one month overdue and in excess of 1 million. The terms of the restructured loans usually require the payment of approximately 10% to 20% of the outstanding balance as a down payment and that they be guaranteed by a third party and carry higher interest rates than prevailing market rates. These loans are usually required to be repaid by the borrower in installments over terms ranging from three months to 60 months. As of December 31, 2018, the total amount of our restructured loans was 147 billion. Because restructured loans are not initially recorded as being delinquent, our delinquency ratios do not fully reflect all delinquent amounts relating to our outstanding credit card balances.

Payments and Charges

Revenues from our credit card operations consist principally of cash advance charges, merchant fees, interest income from credit card loans, interest on late and deferred payments, and annual membership fees paid by cardholders.

Each cardholder is allocated an aggregate credit limit in respect of all cards issued under his or her account and each month. We advise each cardholder of the credit limit relating to the cards in his or her monthly billing statement. Credit limits in respect of card loans are established separately. We conduct ongoing monitoring of all cardholders and accounts, and may reduce the credit limit or cancel an existing cardholder s card based on current economic conditions, receipt of new negative credit data from third party sources or the cardholder s score under the credit risk management systems we use to monitor their behavior, even if the cardholder continues to make timely payments in respect of his or her cards. We consider an account delinquent if the payment due is not received on the first monthly payment date on which such payment was due, and late fees are immediately applied. Late fee charges and computation of the delinquency period are based on each outstanding unpaid transaction or installment, as applicable. See Item 11. Quantitative and Qualitative Disclosures about Market Risk Credit Risk Management Credit Review and Monitoring.

Payments on amounts outstanding on our credit cards must be made (at the cardholder s election at the time of purchase) either in full on each monthly payment date, in the case of lump-sum purchases, or in equal monthly installments over a fixed term from two months to 36 months, in the case of installment purchases. Cardholders may prepay installment purchases at any time without penalty. Payment for cash advances must be made on a lump sum basis. Payments for card loans must be made on an equal principal installment basis over a fixed term from three months up to a maximum of 36 months, up to a maximum loan amount of 30 million.

No interest is charged on lump-sum purchases that are paid in full by the monthly payment date. For installment purchases, we charge a fixed rate of interest on the outstanding balance of the transaction amount, based on the installment period selected at the time of purchase. For a new cardholder, we currently apply an interest rate between approximately 9.5% and 19.5% per annum as determined by the cardholder s application system score. See Item 11. Quantitative and Qualitative Disclosures about Market Risk Credit Risk Management Credit Evaluation and Approval Credit Card Approval Process and Credit Review and Monitoring Credit Card Review and Monitoring.

For cash advances, finance charges start accruing immediately following the cash withdrawal. We currently charge a periodic finance charge on the outstanding balance of cash advance of approximately 6.4% to 23.8% per annum. The periodic finance charge assessed on such balances is calculated by multiplying the daily installment balances for each day during the billing cycle by the applicable periodic finance charge rate, and aggregating the results for each day in the billing period. In addition to finance charges, cardholders using cash advance networks operated by companies that are not financial institutions (such as Hannet and NICE) are charged a minimum commission of 700 and a maximum of 900 per withdrawal.

We also generally charge a basic annual membership fee of 5,000 to 25,000 for regular and gold cards and 30,000 to 1,000,000 for platinum cards. The determination of the annual fee is based on various factors including the type of card, and whether affiliation options are selected by the cardholder. For certain cards, such as the Woori V Card, we will waive membership fees if customers charge above a certain amount.

We outsource the management of merchants to BC Card. We charge merchant fees to merchants for processing transactions. Merchant fees vary depending on the type of merchant and the total transaction amounts generated by the merchant. As of December 31, 2018, we charged merchants an average of 1.40% of their respective total transaction amounts. In addition to merchant fees, we receive nominal interchange fees for international card transactions.

Capital Markets Activities

We engage in capital markets activities for our own account and for our customers. Our capital markets activities include securities investment and trading, derivatives trading, asset securitization services and investment banking.

Securities Investment and Trading

Through Woori Bank, we invest in and trade securities for our own account, in order to maintain adequate sources of liquidity and to generate interest and dividend income and capital gains. As of December 31, 2018, our investment portfolio, which consists of financial assets at fair value through other comprehensive income and securities at amortized cost, and our trading portfolio, which consists of financial assets at fair value through profit or loss (excluding deposits, derivative assets and loans), had a combined total book value of 44,691 billion and represented 13.1% of our total assets.

Our trading and investment portfolios consist primarily of Korean treasury securities and debt securities issued by Korean government agencies, local governments or government-invested enterprises, and debt securities issued by financial institutions. As of December 31, 2018, we held debt securities with a total book value of 41,836 billion, of which:

- debt securities at amortized cost accounted for 22,939 billion, or 54.8%;
- debt securities at fair value through other comprehensive income accounted for 17,072 billion, or 40.8%; and
- debt securities at fair value through profit or loss accounted for 1,825 billion, or less than 4.4%.

Of these amounts, as of December 31, 2018, debt securities issued by the Korean government amounted to 7,523 billion, or 32.8% of our debt securities at amortized cost, 1,358 billion, or 8.0% of our debt securities at fair value through other comprehensive income, and 516 billion, or 28.3% of our debt securities at fair value through profit or loss.

From time to time, we also purchase and sell equity securities for our securities portfolios. Our equity securities consist primarily of equities listed on the KRX KOSPI Market or the KRX KOSDAQ Market. As of December 31, 2018:

- equity securities at fair value through other comprehensive income had a book value of 951 billion, or 5.3% of our securities at fair value through other comprehensive income portfolio; and
- equity securities at fair value through profit or loss accounted for 878 billion, or 23.8% of our securities at fair value through profit or loss portfolio.

Funds that are not used for lending activities are used for investment and liquidity management purposes, including investment and trading in securities. See Assets and Liabilities Securities Investment Portfolio.

For a discussion of our risk management policies with respect to our securities trading activities, see Item 11. Quantitative and Qualitative Disclosures about Market Risk Market Risk Management Market Risk Management for Trading Activities.

Derivatives Trading

We offer derivatives products and engage in derivatives trading, mostly for our corporate customers. Our trading volume was 233,871 billion in 2016, 268,734 billion in 2017 and 324,410 billion in 2018. Our aggregate net trading revenue from derivatives for the years ended December 31, 2016, 2017 and 2018 was 176 billion, 3 billion and 91 billion, respectively.

We provide and trade a number of derivatives products principally through sales or brokerage accounts for our customers, including:

- interest rate swaps, options and futures, relating principally to Won interest rate risks;

- index futures and options, relating to stock market fluctuations;

- cross currency swaps, relating to foreign exchange risks, largely for Won against U.S. dollars;

- foreign exchange forwards, swaps, options and futures, relating to foreign exchange risks;

- commodity derivatives, which we provide to customers that wish to hedge their commodities exposure; and

- credit derivatives, which we provide to financial institutions that wish to hedge existing credit exposures or take on credit exposure to generate revenue.

Our derivatives operations focus on addressing the needs of our corporate clients to hedge their risk exposure and on hedging our risk exposure resulting from such client contracts. We also engage in derivatives trading activities to hedge the interest rate and foreign currency risk exposure that arises from our own assets and liability positions. In addition, we engage in proprietary trading of derivatives, such as index options and futures within our regulated open position limits, for the purpose of generating capital gains.

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The following shows the estimated fair value of derivatives we held or had issued for trading purposes as of the dates indicated:

	As of December 31,					
	2016		2017		2018	
	Estimated Fair Value of Assets	Estimated Fair Value of Liabilities	Estimated Fair Value of Assets	Estimated Fair Value of Liabilities	Estimated Fair Value of Assets	Estimated Fair Value of Liabilities
	(in billions of Won)					
Currency derivatives	2,331	2,246	2,732	2,782	1,623	1,571
Interest rate derivatives	491	532	236	267	229	279
Equity derivatives	73	229	147	100	174	241
Commodity derivatives	3	3	1	1		
Total	2,898	3,010	3,116	3,150	2,026	2,091

For a discussion of our risk management policies with respect to our derivatives trading activities, see Item 11. Quantitative and Qualitative Disclosures about Market Risk Market Risk Management Market Risk Management for Trading Activities.

Asset Securitization Services

We are active in the Korean asset-backed securities market. Through Woori Bank, we participate in asset securitization transactions in Korea by acting as arranger, trustee or liquidity provider. In 2018, we were involved in asset securitization transactions with an initial aggregate issue amount of 765 billion and generated total fee income of approximately 16 billion in connection with such transactions. The securities issued in asset securitization transactions are sold mainly to institutional investors buying through Korean securities firms.

Investment Banking

Through Woori Bank, we engage in investment banking activities in Korea. In addition, we provide project finance and financial advisory services, in the area of social overhead capital projects such as highway, port, power and water and sewage projects, as well as structured finance, leveraged buy-out financing, equity and venture financing and mergers and acquisitions financing services. In 2018, we generated investment banking revenue of approximately 218 billion from gains on investment in foreign bonds and equity securities and fees from advisory and other services.

We believe that significant opportunities exist for us to leverage our existing base of large corporate and small- and medium-sized banking customers to cross-sell investment banking services. We intend to expand our investment banking operations to take advantage of these opportunities, with a view to increasing our fee income and further diversifying our revenue base.

International Banking

Through Woori Bank, we engage in various international banking activities, including foreign exchange services and dealing, import and export-related services, offshore lending, syndicated loans and foreign currency securities investment. These services are provided primarily to our domestic customers and overseas subsidiaries and affiliates of Korean corporations and, to a limited extent, to local companies and individuals. We also raise foreign currency funding through our international banking operations. In addition, we provide commercial banking services to retail and corporate customers in select overseas markets.

The table below sets forth certain information regarding our foreign currency assets and borrowings:

	As of December 31,		
	2016	2017	2018
	(in millions of US$)		
Total foreign currency assets	US$ 33,670	US$ 35,678	US$ 35,587
Foreign currency borrowings			
Call money	US$ 1,131	US$ 593	US$ 872
Long-term borrowings	4,841	4,290	4,167
Short-term borrowings	4,797	6,191	6,336
Total foreign currency borrowings	US$ 10,769	US$ 11,074	US$ 11,375

The table below sets forth the overseas subsidiaries and direct branches of Woori Bank in operation as of December 31, 2018:

Business Unit(1)	Location
Subsidiaries:	
Woori America Bank	United States
PT Bank Woori Saudara Indonesia 1906, Tbk	Indonesia
Woori Global Markets Asia Limited	China (Hong Kong)
Woori Bank (China) Limited	China
AO Woori Bank	Russia
Banco Woori Bank do Brasil S.A.	Brazil
Woori Finance Cambodia PLC.	Cambodia
Woori Finance Myanmar Co., Ltd.	Myanmar
Wealth Development Bank Corporation	Philippines
Woori Bank Vietnam Limited	Vietnam
WB Finance Co., Ltd.	Cambodia
Woori Bank Europe GmbH	Germany
Branches, Agencies and Representative Offices:	
London Branch	United Kingdom
Tokyo Branch	Japan
Singapore Branch	Singapore
Hong Kong Branch	China (Hong Kong)
Bahrain Branch	Bahrain
Dhaka Branch	Bangladesh
Gaeseong Branch	Korea(2)
New York Agency	United States
Los Angeles Branch	United States
Chennai Branch	India
Sydney Branch	Australia
Dubai Branch	United Arab Emirates
Gurgaon Branch	India

Mumbai Branch	India
Kuala Lumpur Representative Office	Malaysia
Yangon Representative Office	Myanmar
Iran Representative Office[3]	Iran
Katowice Representative Office	Poland

(1) Does not include subsidiaries and branches in liquidation or dissolution.
(2) Due to the shutdown of the Gaeseong Industrial Complex in February 2016, the Gaeseong Branch is currently located at our corporate headquarters in Seoul.
(3) No longer operational since December 2018 due to the re-imposition of sanctions.

The principal activities of the overseas branches and subsidiaries of Woori Bank are providing trade financing and local currency funding for Korean companies and Korean nationals operating in overseas markets as well as servicing local customers and providing foreign exchange services in conjunction with our headquarters. On a limited basis, such overseas branches and subsidiaries also engage in the investment and trading of securities of foreign issuers.

Woori America Bank currently operates 24 branches in New York, New Jersey, Maryland, Virginia, Pennsylvania and California and provides retail and corporate banking services targeted towards the Korean-American community. Woori America Bank had total assets of US$1,952 million as of December 31, 2018 and net profit of US$19 million in 2018.

In November 2007, Woori Bank established a local subsidiary in China, Woori Bank (China) Limited, which currently has branches in Beijing, Shanghai, Shenzhen, Suzhou, Tianjin, Dalian, Chengdu, Weihai, Chongqing and Shenyang. Woori Bank also established a local subsidiary in Russia, AO Woori Bank, in January 2008 and it currently has branches in Moscow and St. Petersburg and a representative office in Vladivostok.

In January 2014, Woori Bank completed the purchase of an additional 27% equity interest (in addition to the 6% equity interest it previously acquired through its subsidiary PT. Bank Woori Indonesia) in PT. Bank Himpunan Saudara 1906, an Indonesian commercial bank with a network of over 100 branches and offices throughout Indonesia. In December 2014, PT. Bank Woori Indonesia merged with and into PT. Bank Himpunan Saudara 1906. The merged entity, in which Woori Bank holds a 79.9% equity interest, was renamed PT Bank Woori Saudara Indonesia 1906, Tbk and became Woori Bank s consolidated subsidiary. As of December 31, 2018, PT Bank Woori Saudara Indonesia 1906, Tbk had total assets of US$2,107 million and shareholders equity of US$449 million.

In October 2016, Woori Bank acquired a 51% equity interest in Wealth Development Bank Corp., a thrift bank in the Philippines with a network of 16 branches and approximately 300 employees.

In November 2016, Woori Bank established a local subsidiary in Vietnam, Woori Bank Vietnam, which commenced operations in January 2017 and currently operates the branches in Hanoi, Bac Ninh, Ho Chi Minh City and Haiphong.

Woori Bank is also expanding its network of branches in South and Southeast Asia through our other local subsidiaries, including PT Bank Woori Saudara Indonesia 1906, Tbk, Woori Finance Myanmar, Wealth Development Bank Corp. and Woori Finance Cambodia. In June 2018, Woori Bank acquired VisionFund (Cambodia) Ltd., a microfinance lender in Cambodia, which was renamed WB Finance Co., Ltd. As of December 31, 2018, WB Finance Co., Ltd. had total assets of US$240 million and shareholders equity of US$39 million.

In November 2018, Woori Bank established a German subsidiary, Woori Bank Europe GmbH, which is headquartered in Frankfurt and conducts our European operations. As of December 31, 2018, Woori Bank Europe GmbH had total assets of US$52 million and shareholders equity of US$52 million.

Asset Management

Trust Management Services

Money Trusts. Through Woori Bank, we offer money trust products to our customers and manage the funds they invest in money trusts. The money trusts we manage are generally trusts with a fixed life that allow investors to share in the investment performance of the trust in proportion to the amount of their investment in the trust. We principally offer the following types of money trust products:

retirement trusts, which invest funds received from corporations or organizations and manage these funds until they are withdrawn to pay retirement funds to a corporation s officers or employees or an organization s members;

pension trusts, which invest funds received until pension benefits are due to be disbursed to a pension beneficiary; and

specified money trusts, which invest cash received as trust property at the direction of the trustors and, once the trust matures, disburse the principal and any gains to the trust beneficiaries.

We also offer other types of money trusts that have a variety of differing characteristics with respect to, for example, maturities and tax treatment.

Under Korean law, the assets of our money trusts are segregated from our assets and are not available to satisfy the claims of our creditors. We are, however, permitted to maintain deposits of surplus funds generated by trust assets in certain circumstances as set forth under the Financial Investment Services and Capital Markets Act and the regulations thereunder. Except for specified money trusts, we have investment discretion over all money trusts, which are pooled and managed jointly for each type of trust. Specified money trusts are established on behalf of individual customers, typically corporations, which direct our investment of trust assets.

We receive fees for our trust management services that are generally based upon a percentage, ranging between 0.01% and 2.0%, of the net asset value of the assets under management. We also receive penalty payments when customers terminate their trust deposit prior to the original contract maturity. Fees that we received for trust management services (including those fees related to property trust management services, described below, but excluding those fees relating to guaranteed trusts, which are eliminated in consolidation), net of expenses, amounted to 78 billion in 2016, 142 billion in 2017 and 177 billion in 2018.

For some of the money trusts we manage, we have guaranteed the principal amount of an investor s investment as well as a fixed rate of interest. We no longer offer new money trust products where we guarantee both the principal amount and a fixed rate of interest. We continue to offer pension-type money trusts that provide a guarantee of the principal amount of an investor s investment.

The following table shows the balances of our money trusts by type as of the dates indicated. We consolidate within our financial statements trust accounts for which we guarantee both the repayment of the principal amount and a fixed rate of interest and trust accounts for which we guarantee only the repayment of the principal amount, while we do not consolidate performance trusts on which we do not guarantee principal or interest:

	As of December 31,		
	2016	**2017**	**2018**
		(in billions of Won)	
Principal and interest guaranteed trusts	1	1	1
Principal guaranteed trusts	1,344	1,401	1,409
Performance trusts	25,767	29,252	36,451
Total	27,112	30,654	37,861

The trust assets we manage consist principally of investment securities, loans made from the trusts and amounts due from banks. The investment securities consist of government-related debt securities, corporate debt securities, including bonds and commercial paper, equity securities and other securities. As of December 31, 2018, our money trusts had invested in securities with an aggregate book value of 13,667 billion, which accounted for approximately

25.5% of our money trust assets. Debt securities accounted for 4,627 billion of this amount.

Our money trusts also invest, to a lesser extent, in equity securities, including beneficiary certificates issued by investment trust management companies. As of December 31, 2018, equity securities held by our money trusts amounted to 9,040 billion, which accounted for approximately 16.9% of our money trust assets. Of this amount, 1,720 billion was from money trusts over which we had investment discretion and the remainder was from specified money trusts.

Loans made by our money trusts are similar in type to the loans made by our banking operations. As of December 31, 2018, our money trusts had made loans in the aggregate principal amount of 16,994 billion (excluding loans to our banking operations of 3,020 billion), which accounted for approximately 31.7% of our money trust assets.

The amounts due from banks consist of local currency and foreign currencies. As of December 31, 2018, such amounts due from banks totaled 14,217 billion, which accounted for approximately 26.5% of our money trust assets.

If the income from a money trust for which we provide a guarantee is less than the amount of the payments we have guaranteed, we will need to pay the amount of the shortfall with funds from special reserves maintained in our trust accounts, followed by basic fees from that money trust and funds from our banking operations. We net any payments we make as a result of these shortfalls against any gains we receive from other money trusts. No material payments of any such shortfall amounts were made in 2018.

Property Trusts. We also offer property trust management services, where we manage non-cash assets in return for a fee. Non-cash assets include mostly receivables (including those securing asset-backed securities), real property and securities, but can also include movable property such as artwork. Under these arrangements, we render escrow or custodial services for the property in question and collect fees in return.

In 2018, our property trust fees generally ranged from 0.003% to 0.46% of total assets under management, depending on the type of trust account product. As of December 31, 2018, the balance of our property trusts totaled 15,005 billion.

Property trusts are not consolidated within our financial statements.

Trustee and Custodian Services Relating to Securities Investment Trusts

Through Woori Bank, as of December 31, 2018, we acted as a trustee for 3,272 securities investment trusts, mutual funds and other investment funds. We receive a fee for acting as a trustee and generally perform the following functions:

- receiving payments made in respect of such securities;
- executing trades in respect of such securities on behalf of the investment fund, based on instructions from the relevant investment fund management company; and
- in certain cases, authenticating beneficiary certificates issued by investment trust management companies and handling settlements in respect of such beneficiary certificates.

For the year ended December 31, 2018, our fee income from such services was 13 billion.

Other Businesses

Management of National Housing Urban Fund

In April 2008, through Woori Bank, we were selected to be the lead manager of the National Housing Urban Fund. The National Housing Urban Fund provides financial support to low-income households in Korea by providing mortgage financing and construction loans for projects to build small- and medium-sized housing. As of December 31, 2018, outstanding housing loans from the National Housing Urban Fund amounted to approximately 106.2 trillion, of which we originated approximately 56.6 trillion. The activities of the National Housing Urban Fund are funded primarily by the issuance of national housing bonds, which must be purchased by persons and legal entities wishing to make real estate-related registrations and filings, and by subscription savings deposits held at the National Housing Urban Fund.

In return for managing the operations of the National Housing Urban Fund, we receive a monthly fee. This fee consists of a fund raising fee, a loan origination fee and a management fee. The fund raising fee is based on the number of National Housing Urban Fund subscription savings deposit accounts opened and the level of activity for existing accounts and the number of National Housing Urban Fund bonds issued or redeemed. The loan origination fee is based on the number of new National Housing Urban Fund loans and the number of National Housing Urban Fund mortgage loans to contractors constructing housing units that are assumed by the individual buyers of housing units and the level of activity for existing loans during each month. The management fee is based on the monthly average of the number of outstanding accounts and the monthly average of the number of overdue loans owed to the National Housing Urban Fund. We received total fees of approximately 52 billion for managing the National Housing Urban Fund in 2018.

Bancassurance

The term bancassurance refers to the marketing and sale by commercial banks of insurance products manufactured within a group of affiliated companies or by third-party insurance companies. Through Woori Bank, we market a wide range of bancassurance products. In 2018, we generated fee income of approximately 86 billion through the marketing of bancassurance products. We believe that we will be able to continue to develop an important new source of fee-based revenues by expanding our offering of these products. We have entered into bancassurance marketing arrangements with 28 insurance companies, including TongYang Life Insurance, Hanwha Life Insurance, Samsung Life Insurance, Samsung Fire and Marine Insurance, Hyundai Fire and Marine Insurance and American International Assurance, and plan to enter into additional insurance product marketing arrangements with other leading insurance companies whose names and reputation are likely to be familiar to our customer base.

Private Equity

In 2016, Woori Private Equity Co., Ltd., which was established in October 2005, registered as a specialized private placement collective investment business under the Financial Investment Services and Capital Markets Act and changed its name to Woori Private Equity Asset Management Co., Ltd., or Woori PEAM. Such registration enabled it to manage specialized private placement collective investment vehicles (which include hedge funds) targeting professional investors, in addition to its existing business of making long-term and strategic investments in buyout target companies and actively involving itself in their management. In 2017, three of the private equity funds for which Woori PEAM acted as general partner, Woori Private Equity Fund, the size of which was approximately 344 billion, Woori Blackstone Korea Opportunity Private Equity Fund I, the size of which was approximately 606 billion, and Woori Columbus Private Equity Fund I, the size of which was approximately 61 billion, were successfully liquidated after meeting their respective investment objectives. We expect that Woori PEAM will continue to provide us with investment opportunities, through identifying potential investees suffering from inefficient management and effecting financial restructuring and strategic reorientation in those investees so as to enhance their enterprise value, as well as serve as a source of business for other segments by managing specialized private placement collective investment vehicles for professional investors.

Competition

We compete with other financial institutions in Korea, including principally nationwide and regional Korean commercial banks and branches of foreign banks operating in Korea. In addition, in particular segments such as credit cards, asset management and bancassurance, we compete with specialized financial institutions focusing on such segments. Some of the financial institutions we compete with are larger in terms of asset size and customer base and have greater financial resources or more specialized capabilities than us or our subsidiaries.

Competition in the Korean financial market has been and is likely to remain intense. In particular, in the area of our core banking operations, most Korean banks have been focusing on retail customers and small- and medium-sized enterprises in recent years, although they have begun to increase their exposure to large corporate borrowers, and have been focusing on developing fee income businesses, including bancassurance, as increasingly important sources of revenue. In the area of credit cards, Korean banks and credit card companies have in the past engaged in aggressive marketing activities and made significant investments, contributing to some extent to the lower profitability and asset quality problems previously experienced with respect to credit card receivables.

In addition, general regulatory reforms in the Korean financial industry have increased competition among banks and other financial institutions in Korea. In the second half of 2015, the Korean government implemented measures to facilitate bank account portability of retail customers by requiring commercial banks to establish systems that allow retail customers to easily switch their bank accounts at one commercial bank to another and automatically transfer the automatic payment settings of their former accounts to the new ones. Such measures are expected to further intensify competition among financial institutions in Korea.

Furthermore, the introduction of Internet-only banks in Korea is expected to increase competition in the Korean banking industry. Internet-only banks generally operate without branches and conduct most of their operations through electronic means, which enable them to minimize costs and offer customers higher interest rates on deposits or lower lending rates. In April 2017, K bank, the first Internet-only bank in Korea, in which we own 13.8% of the equity with voting rights, commenced operations. Kakao Bank, a mobile-only bank, commenced operations in July 2017.

Moreover, in March 2016, the Financial Services Commission introduced an individual savings account scheme in Korea, which enables individuals to efficiently manage a wide range of retail investment vehicles, including cash deposits, investment funds and securities investment products, from a single integrated account with one financial institution and offers tax benefits on investment returns. Since the scheme backed by the Korean government allows only one individual savings account per person, financial institutions have been competing to retain existing customers and attract new customers since the launch of the individual savings account scheme. Over 30 financial institutions, including banks, securities companies and insurance companies, have registered with the Financial Services Commission to sell their individual savings account products, and competition among these financial institutions is expected to remain intense.

Moreover, the Korean financial industry is undergoing significant consolidation. The number of nationwide commercial banks in Korea has decreased from 16 as of December 31, 1997 to six as of December 31, 2018. A number of significant mergers and acquisitions in the industry have taken place in Korea in recent years, including Hana Financial Group s acquisition of a controlling interest in Korea Exchange Bank in 2012, the subsequent merger of Hana Bank into Korea Exchange Bank in 2015, KB Financial Group s acquisition of Hyundai Securities Co., Ltd. in 2016 and the subsequent merger of Hyundai Securities with and into KB Investment & Securities Co., Ltd. in 2016. In 2016, Mirae Asset Securities Co., Ltd. acquired a 43% interest in KDB Daewoo Securities Co., Ltd., which subsequently merged with and into Mirae Asset Securities to create Mirae Asset Daewoo Securities Co., Ltd., the largest securities company in Korea in terms of capital. Furthermore, in 2014, pursuant to the implementation of the Korean government s privatization plan with respect to Woori Finance Holdings 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 KDIC s ownership interest in Kwangju Bank and Kyongnam Bank were acquired by JB Financial Group and BS Financial Group, respectively. See Item 4.A. History and Development of the Company Privatization Plan.

We expect that consolidation in the Korean financial industry will continue. Other financial institutions may seek to acquire or merge with other entities, and the financial institutions resulting from this consolidation may, by virtue of their increased size and business scope, provide significantly greater competition for us. We also believe that foreign financial institutions, many of which have greater experience and resources than we do, may seek to compete with us in providing financial products and services either by themselves or in partnership with existing Korean financial institutions. See Item 3.D. Risk Factors Risks relating to competition.

Assets and Liabilities

The tables below and accompanying discussions provide selected financial highlights regarding our assets and liabilities on a consolidated basis.

Certain information with respect to our loan portfolio and the asset quality of our loans is presented below on a basis consistent with certain requirements of the Financial Services Commission applicable to Korean financial institutions, which differs (as described below where applicable) from the presentation of such information in our financial statements prepared in accordance with IFRS, as we believe that such alternative presentation allows us to provide additional details regarding our loan portfolio and the asset quality of our loans which would be helpful to our investors.

Loan Portfolio

As of December 31, 2018, the balance of our total loan portfolio was 262,034 billion. As of December 31, 2018, 85.4% of our total loans were Won-denominated loans and 14.6% of our total loans were denominated in other currencies. Of the 38,206 billion of foreign currency-denominated loans as of that date, approximately 45.2% represented foreign loans provided by Woori Bank to offshore entities and individuals. Woori Bank makes foreign loans primarily through its overseas branches to affiliates of large Korean manufacturing companies for trade financing and working capital.

Except where we specify otherwise, all loan amounts stated below do not include amounts due from banks and other receivables and are prior to deducting allowance for credit losses and present value discount or reflecting deferred origination costs, and all corporate loan amounts stated below include loans made to the Korean government and government-owned agencies and banks.

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Loan Types

The following table presents loans by type as of the dates indicated. Total loans reflect our loan portfolio, including past due amounts.

	As of December 31,				
	2014	2015	2016	2017	2018
	(in billions of Won)				
Domestic:					
Corporate[1]:					
Commercial and industrial	89,410	92,802	88,968	93,320	96,283
Lease financing			7	25	55
Trade financing	11,937	11,446	10,699	9,290	9,649
Other commercial	11,440	12,229	12,923	21,283	16,177
Total corporate	112,787	116,477	112,597	123,918	122,164
Consumer:					
General purpose household	25,070	26,971	30,684	34,374	36,962
Mortgage	28,988	40,598	47,630	47,476	51,280
Home equity	25,340	24,657	24,486	25,513	26,324
Total consumer	79,398	92,226	102,800	107,363	114,566
Credit cards	5,114	6,099	6,674	6,827	8,051
Total domestic	197,299	214,802	222,071	238,108	244,781
Foreign:					
Corporate[2]:					
Commercial and industrial	7,989	9,518	10,540	9,632	11,837
Trade financing	725	1,421	2,156	2,655	2,186
Other commercial	245	206	350	471	700
Total corporate	8,959	11,145	13,046	12,758	14,723
Consumer	819	1,222	1,684	1,927	2,530
Total foreign	9,778	12,367	14,730	14,685	17,253
Total loans[3]	207,077	227,169	236,801	252,793	262,034
Less: present value discount	(17)	(5)	(14)	(11)	(10)
Less: deferred origination costs (fees)	368	435	464	511	574
Less: allowance for credit losses	(2,609)	(2,051)	(1,851)	(1,770)	(1,778)
Total loans, net	204,819	225,548	235,400	251,523	260,820

(1) Including loans made to banks and the Korean government and government-owned agencies.

(2) Including loans made to banks.

(3) Not including due from banks and other financial assets (or other receivables) and prior to deducting allowance for credit losses and present value discount or reflecting deferred origination costs.

Loan Concentrations

On a consolidated basis, our exposure to any single borrower or any single *chaebol* is limited by law to 20% and 25%, respectively, of our net aggregate equity capital, as defined under the Enforcement Decree of the Financial Holding Company Act. See Supervision and Regulation Principal Regulations Applicable to Financial Holding Companies Financial Exposure to Any Individual Customer and Major Shareholder. In addition, Woori Bank s exposure to any single borrower or any single *chaebol* is limited by the Bank Act to 20% and 25%, respectively, of its total Tier I and Tier II capital.

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20 Largest Exposures by Borrower

As of December 31, 2018, our exposures to our 20 largest borrowers or issuers totaled 49,913 billion and accounted for 12.0% of our total exposures. The following table sets forth our total exposures to those borrowers or issuers as of that date:

Company (Credit Rating)[1]	Loans: Won currency	Loans: Foreign currency	Equity securities	Debt securities	Guarantees and acceptances	Total exposures	Collateral[2]	Amounts classified as substandard or below[3]
	(in billions of Won)							
Korea Development Bank (AAA)		14		9,424		9,438		8
Korean Government[4]				9,171		9,171		
The Bank of Korea[4]	930			7,044		7,974		
Industrial Bank of Korea (AAA)	91			3,308		3,399	22	
Kyobo Securities (A+)	2,543					2,543		
Samsung Electronics (AAA)	201	2,231	24			2,456		
Korea Housing Finance Corporation (AAA)				2,241		2,241		
Korea Student Aid Foundation (AAA)				1,267		1,267		
Mirae Asset Deawoo (AA)	1,150					1,150		
KB Securities (AA)	1,139					1,139		
Export-Import Bank of Korea (AAA)				1,070	10	1,080		
Korea Land & Housing Corporation (AAA)	328			733		1,061		
NH Investment & Securities (AA+)	1,029					1,029		
U.S. Government[4]				974		974		
Shinhan Investment (AA)	970					970		
Defense Acquisition Program Administration (A)					927	927		
Korea SMEs and Startups Agency (AAA)	1			861		862		
Lotte Corporation (AA)	650	168				818		
Korea Expressway Corporation (AAA)				709		709		
Meritz Securities (AA-)	705					705		
Total	9,737	2,413	24	36,802	937	49,913	22	8

(1) Credit ratings are from one of the domestic credit rating agencies in Korea, including Korea Ratings Corporation, NICE Investors Service Co. and Korea Information Service Inc., as of December 31, 2018. If multiple ratings were available, the lowest one is indicated.

(2) The value of collateral is appraised based on future cash flow and observable market price.

(3) Classification is based on the Financial Services Commission s asset classification criteria.

(4) Credit rating is unavailable.

As of December 31, 2018, four of these top 20 borrowers or issuers were companies belonging to the 24 largest *chaebol* in Korea. See Item 3.D. Risk Factors Risks relating to our corporate credit portfolio We have exposure to the largest Korean commercial conglomerates, known as *chaebols*, and, as a result, financial difficulties of *chaebols* may have an adverse impact on us.

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Exposure to Chaebols

As of December 31, 2018, 5.8% of our total exposure was to the 24 largest *chaebols* in Korea. The following table shows, as of December 31, 2018, our total exposures to the 10 *chaebols* to which we have the largest exposure:

	Loans							Amounts Classified as substandard or below[(2)]
Chaebol	**Won currency**	**Foreign currency**	**Equity securities**	**Debt securities**	**Guarantees and acceptances**	**Total exposures**	**Collateral[(1)]**	
				(in billions of Won)				
Samsung	896	3,326	38	10	1,118	5,388	112	19
Hyundai Motors	1,207	723	53	101	760	2,844		
Kyobo Life Insurance	2,548				3	2,551		
Hyundai Heavy Industries	421	91		10	1,262	1,784	10	
Lotte	1,167	488			77	1,732	18	
SK	764	251	3	13	372	1,403	58	
LG	1,042	243		20	77	1,382	4	
Mirae Asset	1,170					1,170		
Hanwha	690	196		6	72	964	142	
Doosan	276	55		8	493	832	18	
Total	10,181	5,373	94	168	4,234	20,050	362	19

(1) The value of collateral is appraised based on future cash flow and observable market price.

(2) Classification is based on the Financial Services Commission s asset classification criteria.

Loan Concentration by Industry

The following table shows, as of December 31, 2018, the aggregate balance of our domestic and foreign corporate loans by industry concentration and as a percentage of our total corporate lending:

	Aggregate corporate loan balance (in billions of Won)	**Percentage of total corporate loan balance**
Industry		
Manufacturing	37,414	27.3%
Financial and insurance	20,542	15.0
Retail and wholesale	16,572	12.1
Hotel, leisure or transportation	7,508	5.5

Construction	4,081	3.0
Government and government agencies	311	0.2
Other	50,459	36.9
Total	136,887	100.0%

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Maturity Analysis

The following table sets out, as of December 31, 2018, the scheduled maturities (time remaining until maturity) of our loan portfolio:

	1 year or less	Over 1 year but not more than 5 years	Over 5 years	Total
		(in billions of Won)		
Domestic				
Corporate[1]				
Commercial and industrial	64,209	26,881	5,193	96,283
Lease financing	2	53		55
Trade financing	9,648	1		9,649
Other commercial	12,869	2,617	691	16,177
Total corporate	86,728	29,552	5,884	122,164
Consumer				
General purpose household	20,628	6,580	9,754	36,962
Mortgage	10,113	13,379	27,788	51,280
Home equity	3,395	3,059	19,870	26,324
Total consumer	34,136	23,018	57,412	114,566
Credit cards	6,756	932	363	8,051
Total domestic	127,620	53,502	63,659	244,781
Foreign				
Corporate[2]				
Commercial and industrial	6,443	4,085	1,309	11,837
Trade financing	2,115	71		2,186
Other commercial	207	360	133	700
Total corporate	8,765	4,516	1,442	14,723
Consumer				
Other consumer	301	657	1,572	2,530
Total foreign	9,066	5,173	3,014	17,253
Total loans	136,686	58,675	66,673	262,034

(1) Including loans made to banks and the Korean government and government-owned agencies.
(2) Including loans made to banks.

A significant portion of our loans with maturities of one year is renewed annually. We typically roll over our working capital loans and consumer loans (other than those payable in installments) after we conduct our normal loan review in accordance with our loan review procedures. Under our internal guidelines, we may generally extend working capital loans on an annual basis for an aggregate term of five years. Those guidelines also allow us to generally extend consumer loans other than home equity loans for another term on an annual basis for an aggregate term of up to five years (and home equity loans for an aggregate term of up to 10 years).

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Interest Rates

The following table shows, as of December 31, 2018, the total amount of our loans due after one year that have fixed interest rates and variable or adjustable interest rates:

	Domestic	Foreign	Total
	(in billions of Won)		
Fixed rate(1)	52,625	2,529	55,154
Variable or adjustable rates(2)	64,536	5,658	70,194
Total loans	117,161	8,187	125,348

(1) Fixed rate loans are loans for which the interest rate is fixed for the entire term.

(2) Variable or adjustable rate loans are loans for which the interest rate is not fixed for the entire term.

For additional information regarding our management of interest rate risk, see Item 11. Quantitative and Qualitative Disclosures about Market Risk Market Risk Management Asset and Liability Management.

Asset Quality of Loans

Except where we specify otherwise, all loan amounts stated below do not include amounts due from banks and other receivables and are prior to deducting allowance for credit losses and present value discount or reflecting deferred origination costs, and all corporate loan amounts stated below include loans made to the Korean government and government-owned agencies and banks.

Loan Classifications

The Financial Services Commission generally requires Korean financial institutions to analyze and classify their assets by quality into one of five categories for reporting purposes. In making these classifications, we take into account a number of factors, including the financial position, profitability and transaction history of the borrower, and the value of any collateral or guarantee taken as security for the extension of credit. This classification method, and our related provisioning policy, is intended to fully reflect the borrower s capacity to repay.

The following is a summary of the asset classification criteria we apply for corporate and consumer loans, based on the asset classification guidelines of the Financial Services Commission. Credit card receivables are subject to classification based on the number of days past due, as required by the Financial Services Commission. We also apply different criteria for other types of credits such as loans to the Korean government or to government-related or controlled entities, certain bills of exchange and certain receivables.

Asset Classification	Characteristics
Normal	Credits extended to customers that, based on our consideration of their business, financial position and future cash flows, do not raise concerns regarding their

	ability to repay the credits.
Precautionary	Credits extended to customers that: based on our consideration of their business, financial position and future cash flows, show potential risks with respect to their ability to repay the credits, although showing no immediate default risk; or are in arrears for one month or more but less than three months.

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Asset Classification	Characteristics
Substandard	Either: credits extended to customers that, based on our consideration of their business, financial position and future cash flows, are judged to have incurred considerable default risks as their ability to repay has deteriorated; or the portion that we expect to collect of total loans (1) extended to customers that have been in arrears for three months or more, (2) extended to customers that have incurred serious default risks due to the occurrence of, among other things, final refusal to pay their debt instruments, entry into liquidation or bankruptcy proceedings, or closure of their businesses, or (3) extended to customers who have outstanding loans that are classified as doubtful or estimated loss.
Doubtful	Credits exceeding the amount we expect to collect of total credits to customers that: based on our consideration of their business, financial position and future cash flows, have incurred serious default risks due to noticeable deterioration in their ability to repay; or have been in arrears for three months or more but less than twelve months.
Estimated Loss	Credits exceeding the amount we expect to collect of total credits to customers that: based on our consideration of their business, financial position and future cash flows, are judged to have to be accounted as a loss as the inability to repay became certain due to serious deterioration in their ability to repay;

have been in arrears for twelve months or more; or

have incurred serious risks of default in repayment due to the occurrence of, among other things, final refusal to pay their debt instruments, liquidation or bankruptcy proceedings or closure of their business.

Loan Loss Provisioning Policy

Under IFRS 9 *Financial Instruments*, which replaced IAS 39, for annual periods commencing on or after January 1, 2018, we establish allowances for credit losses based on expected credit losses instead of incurred losses (as was the case under IAS 39) by assessing changes in expected credit losses and recognizing such changes as impairment loss (or reversal of impairment loss) in profit or loss. Item 5.A. Operating Results Overview Changes in Accounting Standards. Under IFRS 9, the allowance required to be established with respect to a loan or financial asset is the amount of the expected 12-month credit loss or the expected lifetime credit loss for the applicable loan or financial asset, according to three stages of credit risk deterioration since initial recognition.

For financial reporting periods starting prior to January 1, 2018, under IAS 39 *Financial Instruments: Recognition and Measurement*, we established allowances for credit losses with respect to loans using either a case-by-case or collective approach. We assessed individually significant loans on a case-by-case basis and other loans on a collective basis. In addition, if we determined that no objective evidence of impairment exists for a loan, we included such loan in a group of loans with similar credit risk characteristics and assessed them collectively for impairment regardless of whether such loan is significant. If there was objective evidence that an impairment loss had been incurred for individually significant loans, the amount of the loss was measured as the difference between the financial asset s carrying amount and the present value of the estimated future cash flows discounted at such asset s original effective interest rate. Future cash flows were estimated through a case-by-case analysis of individually assessed assets, which took into account the benefit of any guarantee or other collateral held. The value and timing of future cash flow receipts were based on available estimates in conjunction with facts available at the time of review and reassessed on a periodic basis as new information became available.

Under IAS 39, for collectively assessed loans, we based the level of allowance for credit losses on a portfolio basis in light of the homogenous nature of the assets included in each portfolio. The allowances were determined based on a quantitative review of the relevant portfolio, taking into account such factors as the level of arrears, the value of any security, and historical and projected cash recovery trends over the recovery period. The methodologies we used to estimate collectively assessed allowances reflected the probability that the performing customer would default, our historical loss experience (as adjusted by current economic and credit conditions where appropriate) and the emergence period between an impairment event occurring and a loan being identified and reported as impaired.

If additions or changes to the allowance for credit losses are required, then we record provisions for credit loss, which are included in impairment losses due to credit loss and treated as charges against current income. Credit exposures that we deem to be uncollectible, including actual loan losses, net of recoveries of previously charged-off amounts, are charged directly against the allowance for credit losses. See Item 5.A. Operating Results Critical Accounting Policies Impairment of Loans and Allowance for Credit Losses.

We conclude that a loan is impaired when it is under one of the following conditions:

- when the principal is past due by 90 days or more due to significant deterioration in credit;

- for loans overdue for less than 90 days, when it is determined that not even a portion of the loan will be recovered unless a claim action, such as disposal of collateral, is taken; or

- when other objective indicators of impairment have been noted for the loan.

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In addition, if our allowance for credit losses is deemed insufficient for regulatory purposes, we compensate for the difference by recording a planned regulatory reserve for credit loss, which is segregated within our retained earnings. The level of planned regulatory reserve for credit loss required to be recorded is equal to the amount by which our allowance for credit losses under IFRS is less than the greater of (x) the amount of expected loss calculated using the internal ratings-based approach under Basel II and as approved by the Financial Supervisory Service and (y) the required amount of credit loss reserve calculated based on guidelines prescribed by the Financial Services Commission. The following table sets forth the Financial Services Commission s guidelines applicable to banking institutions for the minimum percentages of the outstanding principal amount of the relevant loans or balances that the credit loss reserve must cover:

Loan classifications	Corporate(1)	Consumer	Credit card receivables(2)	Credit card loans(3)
Normal	0.85% or above	1% or above	1.1% or above	2.5% or above
Precautionary	7% or above	10% or above	40% or above	50% or above
Substandard	20% or above	20% or above	60% or above	65% or above
Doubtful	50% or above	55% or above	75% or above	75% or above
Estimated loss	100%	100%	100%	100%

(1) Subject to certain exceptions pursuant to the Banking Industry Supervision Regulations of Korea.

(2) Applicable for credit card receivables for general purchases of products or services.

(3) Applicable for cash advances, card loans and revolving loan receivables.

The process to determine the allowances for off-balance sheet positions under IFRS is similar to the methodology used for loans. Any loss amounts are recognized as a provision in the consolidated statements of financial position within liabilities and charged to the consolidated statement of income as a component of the impairment losses due to credit loss.

The actual amount of credit losses we incur may differ from our loss estimates as a result of changing economic conditions, changes in industry or geographic concentrations, or other factors. We monitor the differences between our estimated and actual incurred credit losses, and we undertake detailed periodic assessments of both individual loans and credit portfolios, the models we use to estimate incurred credit losses in those portfolios and the adequacy of our overall allowances.

Problem Loans and Past Due Accruing Loans

We monitor and manage our problem loans by generally placing loans on problem loan status when payments of interest and/or principal become past due by 90 days. In addition, the following types of loans are classified as problem loans by us even if such loans are not past due:

- Loans to creditors with dishonored notes or checks;
- Loans for which interest payments are reduced or postponed (e.g., through work-out procedures or debt restructurings); and

Loans to creditors included in the watch list maintained by the Korea Federation of Banks.

We reclassify loans as non-problem loans when interest and principal payments are up-to-date and future payments of principal and interest are reasonably assured. In applying payments on problem loans, we first apply payments to the delinquent interest outstanding, then to non-delinquent interest, and then to the outstanding loan balance until the loan is paid in full.

Foregone interest is the portion of the contractual interest due on problem loans that we have not accrued in our books. If we had not foregone interest on our problem loans, we would have recorded gross interest income of 104 billion, 74 billion and 61 billion for 2016, 2017 and 2018, respectively, on loans accounted for as problem loans throughout the year, or since origination for loans held for part of the year. The actual amount of interest income on those loans included in our net income for 2016, 2017 and 2018 was 47 billion, 34 billion and 34 billion, respectively.

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The category accruing loans which are contractually past due 90 days or more as to principal or interest includes loans that are still accruing interest based on the contractual rate of interest but on which principal or interest payments are contractually past due 90 days or more. We continue to accrue contractual interest on loans that are fully secured by deposits or on which there are financial guarantees from the Korean government, the KDIC or certain financial institutions.

The following table shows, as of the dates indicated, the amount of loans that were problem loans and accruing loans which were past due 90 days or more:

	As of December 31,														
	2014			2015			2016			2017			2018	
	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign
	(in billions of Won)													
classified as problem loans[1]														
rate[2]	2,458	82	2,540	1,901	44	1,945	1,200	67	1,267	924	145	1,069	627	35
mer[3]	547	6	553	436	4	440	442	20	462	460	23	483	537	24
tal	3,005	88	3,093	2,337	48	2,385	1,642	87	1,729	1,384	168	1,551	1,164	59
ng loans which are ctually past due 90 days or s to principal or interest[1]														
rate[2]	2		2				3		3	2		2	1	
mer[3]														
tal	2		2				3		3	2		2	1	
	3,007	88	3,095	2,337	48	2,385	1,645	87	1,732	1,386	168	1,553	1,165	59

(1) Not including due from banks and other financial assets (or other receivables), and prior to deducting allowance for credit losses and present value discount or reflecting deferred origination costs.

(2) Including loans made to banks and the Korean government and government-owned agencies.

(3) Includes credit card balances of 80 billion, 93 billion, 142 billion, 163 billion and 188 billion as of December 31, 2014, 2015, 2016, 2017 and 2018, respectively.

The following table shows, as of the dates indicated, the amount of problem loans, potential problem loans and non-performing loans:

	As of December 31,		
	2016	2017	2018
	(in billions of Won)		
Problem loans	1,729	1,553	1,223
Potential problem loans[1]	1,158	937	1,513
Non-performing loans	2,080	1,853	1,329

(1) Potential problem loans are those classified as precautionary that we determine, through our internal loan review process, as requiring close management due to the borrower s financial condition, our forecast for the industry in which it operates or as a result of other developments relating to its business.

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Loan Aging Schedule

The following table shows our loan aging schedule (excluding accrued interest) as of the dates indicated. In line with industry practice, we have restructured a portion of our delinquent credit card balances as loans.

	As of December 31, 2018											
	Normal		Past due by 1 month or less		Past due by 1-3 months		Past due by 3-6 months		Past due by more than 6 months		Total	
	(in billions of Won, except percentages)											
	Amount	%	Amount past due	%	Amount past due	%	Amount past due	%	Amount past due	%	Amount	%
Domestic												
Corporate(1)												
Commercial and industrial	95,811	36.6%	169	0.1%	117	0.0%	84	0.0%	102	0.0%	96,283	36.7%
Lease financing	55	0.0		0.0		0.0		0.0		0.0	55	0.0
Trade financing	9,633	3.7	3	0.0	3	0.0	6	0.0	4	0.0	9,649	3.7
Other commercial	16,133	6.2	6	0.0	3	0.0	3	0.0	32	0.0	16,177	6.2
Total corporate	121,632	46.5	178	0.1	123	0.0	93	0.0	138	0.0	122,164	46.6
Consumer												
General purpose household	36,652	14.0	170	0.1	55	0.0	37	0.0	48	0.0	36,962	14.1
Mortgages	50,862	19.5	281	0.1	59	0.0	39	0.0	39	0.0	51,280	19.6
Home equity	26,112	10.0	117	0.0	36	0.0	24	0.0	35	0.0	26,324	10.0
Total consumer	113,626	43.5	568	0.2	150	0.0	100	0.0	122	0.0	114,566	43.7
Credit cards	7,818	3.1	123	0.0	58	0.0	52	0.0		0.0	8,051	3.1
Total domestic	243,076	93.1	869	0.3	331	0.0	245	0.0	260	0.0	244,781	93.4
Foreign												
Corporate(2)												
Commercial and industrial	11,778	4.5	8	0.0	13	0.0	3	0.0	35	0.0	11,837	4.5
Trade financing	2,185	0.8		0.0		0.0		0.0	1	0.0	2,186	0.8
Other commercial	700	0.3		0.0		0.0		0.0		0.0	700	0.3
Total corporate	14,663	5.6	8	0.0	13	0.0	3	0.0	36	0.0	14,723	5.6
Consumer	2,502	1.0	3	0.0	4	0.0	4	0.0	17	0.0	2,530	1.0

Total foreign	17,165	6.6	11	0.0	17	0.0	7	0.0	53	0.0	17,253	6.6
Total loans[3]	260,241	99.7%	880	0.3%	348	0.0%	252	0.0%	313	0.0%	262,034	100.0%

(1) Including loans made to banks and the Korean government and government-owned agencies.

(2) Including loans made to banks.

(3) Not including due from banks and other financial assets, and prior to deducting allowance for credit losses and present value discount or reflecting deferred origination costs.

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	As of December 31, 2017											
	Normal		Past due by 1 month or less		Past due by 1-3 months		Past due by 3-6 months		Past due by more than 6 months		Total	
	(in billions of Won, except percentages)											
	Amount	%	Amount past due	%	Amount past due	%	Amount past due	%	Amount past due	%	Amount	%
Domestic												
Corporate[1]												
Commercial and industrial	92,767	36.7%	172	0.1%	81	0.0%	98	0.0%	202	0.1%	93,320	36.9%
Lease financing	25	0.0		0.0		0.0		0.0		0.0	25	0.0
Trade financing	9,264	3.7	8	0.0	4	0.0	3	0.0	11	0.0	9,290	3.7
Other commercial	21,238	8.4	5	0.0	5	0.0	1	0.0	34	0.0	21,283	8.4
Total corporate	123,294	48.8	185	0.0	90	0.0	102	0.0	247	0.1	123,918	49.0
Consumer												
General purpose household	34,084	13.5	165	0.1	41	0.0	30	0.0	54	0.0	34,374	13.6
Mortgages	47,104	18.7	277	0.1	46	0.0	23	0.0	26	0.0	47,476	18.8
Home equity	25,308	10.1	116	0.0	27	0.0	21	0.0	41	0.0	25,513	10.1
Total consumer	106,496	42.3	558	0.2	114	0.0	74	0.0	121	0.0	107,363	42.5
Credit cards	6,617	2.7	122	0.0	49	0.0	39	0.0		0.0	6,827	2.7
Total domestic	236,407	93.8	865	0.3	253	0.0	215	0.0	368	0.1	238,108	94.2
Foreign												
Corporate[2]												
Commercial and industrial	9,579	3.8	1	0.0	1	0.0	8	0.0	43	0.0	9,632	3.8
Trade financing	2,649	1.0	4	0.0	0	0.0	0	0.0	2	0.0	2,655	1.0
Other commercial	471	0.2	0	0.0	0	0.0	0	0.0	0	0.0	471	0.2
Total corporate	12,699	5.0	5	0.0	1	0.0	8	0.0	45	0.0	12,758	5.0
Consumer	1,864	0.8	2	0.0	3	0.0	1	0.0	57	0.0	1,927	0.8
Total foreign	14,563	5.8	7	0.0	4	0.0	9	0.0	102	0.0	14,685	5.8
Total loans[3]	250,970	99.6%	872	0.3%	257	0.0%	224	0.0%	470	0.1%	252,793	100.0%

(1) Including loans made to banks and the Korean government and government-owned agencies.

(2) Including loans made to banks.

(3) Not including due from banks and other receivables, and prior to deducting allowance for credit losses and present value discount or reflecting deferred origination costs.

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	As of December 31, 2016											
	Normal		Past due by 1 month or less		Past due by 1-3 months		Past due by 3-6 months		Past due by more than 6 months		Total	
	(in billions of Won, except percentages)											
	Amount	%	Amount past due	%	Amount past due	%	Amount past due	%	Amount past due	%	Amount	%
Domestic												
Corporate[1]												
Commercial and industrial	88,313	37.4%	162	0.1%	98	0.0%	97	0.0%	298	0.2%	88,968	37.7%
Lease financing	7	0.0		0.0		0.0		0.0		0.0	7	0.0
Trade financing	10,671	4.5	4	0.0	4	0.0	10	0.0	10	0.0	10,699	4.5
Other commercial	12,843	5.4	6	0.0	2	0.0	17	0.0	55	0.0	12,923	5.4
Total corporate	111,834	47.3	172	0.1	104	0.0	124	0.0	363	0.2	112,597	47.6
Consumer												
General purpose household	30,412	12.9	141	0.1	30	0.0	21	0.0	80	0.0	30,684	13.0
Mortgages	47,328	20.1	225	0.1	38	0.0	18	0.0	21	0.0	47,630	20.2
Home equity	24,269	10.3	112	0.0	24	0.0	17	0.0	64	0.0	24,486	10.3
Total consumer	102,009	43.3	478	0.2	92	0.0	56	0.0	165	0.0	102,800	43.5
Credit cards	6,502	2.7	92	0.0	51	0.0	29	0.0		0.0	6,674	2.7
Total domestic	220,345	93.3	742	0.3	247	0.0	209	0.0	528	0.2	222,071	93.8
Foreign												
Corporate[2]												
Commercial and industrial	10,449	4.5	1	0.0	2	0.0	36	0.0	52	0.0	10,540	4.5
Trade financing	2,155	0.9		0.0		0.0		0.0	1	0.0	2,156	0.9
Other commercial	350	0.1		0.0		0.0		0.0		0.0	350	0.1
Total corporate	12,954	5.5	1	0.0	2	0.0	36	0.0	53	0.0	13,046	5.5
Consumer	1,664	0.7	2	0.0	6	0.0	2	0.0	10	0.0	1,684	0.7
Total foreign	14,618	6.2	3	0.0	8	0.0	38	0.0	63	0.0	14,730	6.2
Total loans[3]	234,963	99.5%	745	0.3%	255	0.0%	247	0.0%	591	0.2%	236,801	100.0%

(1) Including loans made to banks and the Korean government and government-owned agencies.

(2) Including loans made to banks.
(3) Not including due from banks and other receivables, and prior to deducting allowance for credit losses and present value discount or reflecting deferred origination costs.

Credit Exposures to Companies in Workout, Restructuring or Rehabilitation

Workout is a voluntary procedure through which we, together with the borrower and other creditors, seek to restore the borrower s financial stability and viability. Previously, workouts were regulated under a series of Corporate Restructuring Promotion Acts, which last expired on June 30, 2018. In September 2018, the National Assembly of Korea adopted a new Corporate Restructuring Promotion Act, which became effective on October 16, 2018 and is scheduled to expire on October 15, 2023. Under the new Corporate Restructuring Promotion Act, creditors of a financially troubled borrower may participate in a creditors committee, which is authorized to prohibit such creditors from exercising their rights against the borrower, commence workout procedures and approve or make revisions to a reorganization plan prepared by the lead creditor bank, the borrower and external experts. The composition of the creditors committee is determined at the initial meeting of the committee by the approval of creditors holding not less than 75% of the borrower s total outstanding debt held by creditors who were notified of the initial meeting of the committee. Although creditors that are not financial institutions or hold less than 1% of the total outstanding debt of the borrower need not be notified of the initial meeting of the creditors committee, if such creditors wish to participate, they may not be excluded. Any decision of the creditors committee requires the approval of creditors holding not less than 75% of the total outstanding debt of the borrower. However, if a single creditor holds 75% or more of the borrower s total outstanding debt held by the creditors comprising the creditors committee, any decision of the creditors committee requires the approval of not less than 40% of the total number of creditors (including such single creditor) comprising the committee. An additional approval of creditors holding not less than 75% of the secured debt is required with respect to the borrower s debt restructuring. Once approved, any decision made by the creditors committee is binding on all creditors of the borrower, with the exception of those creditors that were excluded by a resolution of the committee at its initial meeting and those who exercised their right to request that

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their claims be purchased. Creditors that voted against commencement of workout, approval or revision of the reorganization plan, debt restructuring, granting of new credit, extension of the joint management process or other resolutions of the committee have the right to request the creditors that voted in favor of such matters to purchase their claims at a mutually agreed price. In the event that the parties are not able to agree on the terms of purchase, a coordination committee consisting of experts would determine the terms. The creditors that oppose a decision made by the coordination committee may request a court to change such decision.

Korean law also provides for corporate rehabilitation proceedings, which are court-supervised procedures to rehabilitate an insolvent company. Under these procedures, a restructuring plan is adopted at a meeting of interested parties, including creditors of the company. That restructuring plan is subject to court approval.

A portion of our loans to and debt securities of corporate customers are currently in workout, restructuring or rehabilitation. As of December 31, 2018, 406 billion, or 0.2%, of our total loans and debt securities were in workout, restructuring or rehabilitation. This included 182 billion of loans to and debt securities of large corporate borrowers in workout, restructuring or rehabilitation and 215 billion of loans to and debt securities of small- and medium-sized enterprises in workout, restructuring or rehabilitation, which represented 0.1% and 0.1% of our total loans and debt securities, respectively. At Woori Bank, the Corporate Restoration Department manages its workout, restructured and rehabilitated loans. Upon approval of a workout, restructuring or rehabilitation plan, a credit exposure is initially classified as precautionary or lower and thereafter cannot be classified higher than precautionary with limited exceptions. If a corporate borrower is in workout, restructuring or rehabilitation, we take the status of the borrower into account in assessing our loans to and collateral from that borrower for purposes of establishing our allowance for credit losses.

The following table shows, as of December 31, 2018, our 10 largest exposures that were in workout, restructuring or rehabilitation:

	Loans								
Company	**Won Currency**	**Foreign Currency**	**Equity Securities**	**Debt Securities**	**Guarantees and Acceptances**	**Total Exposures**	**Collateral(1)**	**Amounts Classified as Substandard or Below(2)**	**Allowance for Credit Loss**
					(in billions of Won)				
Orient Shipyard					79	79		79	4
Posco Plantec	68					68	20	68	56
DB Metal		28			3	31		31	25
Dongmoon Construction	28					28		28	9
Chuncheon Golf Academy	20					20	18	20	2
STX Heavy Industries					17	17	16	1	1
Dongbu Steel		14	2			16			1
Samhongsa	16					16	9	15	9
Dgen	15					15	8		
J.Y Heavy Industries	12					12	12	12	
Total	159	42	2		99	302	83	254	107

(1) The value of collateral is appraised based on future cash flow and observable market price.
(2) Classification is based on the Financial Services Commission s asset classification criteria.

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Potential Problem Loans

As of December 31, 2018, we had 1,513 billion of corporate loans in respect of which we had serious doubt as to the borrower s ability to comply with repayment terms in the near future. Potential problem loans are those classified as precautionary that we determine, through our internal loan review process, as requiring close management due to the borrower s financial condition, our forecast for the industry in which it operates or as a result of other developments relating to its business. The following table shows changes in our potential problem loans for each of the years indicated:

	Year ended December 31,	
	2017	2018
	(in billions of Won)	
Balance at the beginning of the year	1,158	937
Increase in the balance of potential problem loans to borrowers who became newly classified as borrowers with potential problem loans during the year	404	1,180
Decrease in the balance of potential problem loans to borrowers to whom we had potential problem loans outstanding at the end of the preceding year and have potential problem loans outstanding at the end of the year	(41)	(203)
Decrease in the balance of potential problem loans to borrowers to whom we had potential problem loans outstanding at the end of the preceding year but no longer have any loans outstanding at the end of the year	(515)	(352)
Decrease in the balance of potential problem loans to borrowers to whom we had potential problem loans outstanding at the end of the preceding year but have loans outstanding classified as normal at the end of the year	(74)	(59)
Net other increase in the balance of potential problem loans to existing borrowers to whom we had potential problems loans outstanding at the end of the year	5	10
Balance at the end of the year	937	1,513

Non-Performing Loans

Non-performing loans include commercial and consumer loans which are past due by 90 days or more. In addition, non-performing loans include those loans that, even if they are not past due, are classified as substandard, doubtful or estimated loss based on the Financial Services Commission s asset classification criteria. Moreover, when a consumer loan borrower has any loans that are classified as substandard, doubtful or estimated loss under such criteria, all loans to such borrower are classified as non-performing loans. See Loan Classifications above. The following table shows, as of the dates indicated, certain details of our total non-performing loan portfolio:

	As of December 31,				
	2014	2015	2016	2017	2018
	(in billions of Won, except percentages)				
Total non-performing loans	3,818(1)	2,909(2)	2,080(3)	1,853(4)	1,329(5)
As a percentage of total loans	1.84%	1.28%	0.88%	0.73%	0.51%

(1) Excludes 65 billion of previously delinquent credit card balances restructured into loans that were classified as normal or precautionary.
(2) Excludes 73 billion of previously delinquent credit card balances restructured into loans that were classified as normal or precautionary.
(3) Excludes 102 billion of previously delinquent credit card balances restructured into loans that were classified as normal or precautionary.
(4) Excludes 122 billion of previously delinquent credit card balances restructured into loans that were classified as normal or precautionary.
(5) Excludes 137 billion of previously delinquent credit card balances restructured into loans that were classified as normal or precautionary.

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The above amounts do not include loans classified as substandard or below that we sold to United Asset Management Corp., or UAMCO, or to certain structured companies. See Sales of Non-Performing Loans.

We have also issued securities backed by non-performing loans and other assets. Some of these transactions involved transfers of loans through securitizations where control of the loans has not been surrendered and, therefore, are not treated as sale transactions. Instead, the assets remain on our balance sheet with the securitization proceeds treated as part of borrowings. These assets are included in the table above.

The following table sets forth, as of the dates indicated, our total non-performing loans by type of loan:

	As of December 31,									
	2014		2015		2016		2017		2018	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
	(in billions of Won, except percentages)									
Domestic										
Corporate										
Commercial and industrial	2,751	72.1%	2,098	72.1%	1,222	58.8%	1,051	56.6%	741	55.8%
Lease financing								0.0		0.0
Trade financing	160	4.2	199	6.9	259	12.4	288	15.6	65	4.9
Other commercial	300	7.9	142	4.9	151	7.3	98	5.3	99	7.4
Total corporate	3,211	84.2	2,439	83.9	1,632	78.5	1,437	77.5	905	68.1
Consumer										
General purpose household(1)	426	11.1	283	9.7	227	10.9	187	10.1	190	14.3
Mortgage	45	1.2	46	1.6	60	2.9	73	3.9	94	7.1
Total consumer	471	12.3	329	11.3	287	13.8	260	14.0	284	21.4
Credit cards	65	1.7	68	2.3	51	2.4	57	3.1	70	5.3
Total domestic	3,747	98.2	2,836	97.5	1,970	94.7	1,754	94.6	1,259	94.8
Foreign										
Corporate										
Commercial and industrial	51	1.3	41	1.4	91	4.4	74	4.0	43	3.2
Lease financing						0.0		0.0		0.0
Trade financing	3	0.1	2	0.1	1	0.0	2	0.1	1	0.1
Other commercial			14	0.5		0.0	7	0.4		0.0
Total corporate	54	1.4	57	2.0	92	4.4	83	4.5	45	3.3
Consumer	17	0.4	16	0.5	18	0.9	16	0.9	25	1.9
Total foreign	71	1.8	73	2.5	110	5.3	99	5.4	70	5.2
	3,818	100.0%	2,909	100.0%	2,080	100.0%	1,853	100.0%	1,329	100.0%

Total non- performing loans	

(1) Includes home equity loans.

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The following table presents an analysis of the changes in our non-performing loans for each of the years indicated:

	Year ended December 31,	
	2017	2018
	(in billions of Won)	
Balance at the beginning of the year	2,080	1,853
Additions to non-performing loans		
Loans transferred into non-performing loans	1,443	1,437
Reductions in non-performing loans		
Loans sold	(319)	(246)
Loans modified and returned to performing loans	(189)	(682)
Loans paid down or paid off	(350)	(284)
Loans charged-off	(812)	(749)
Other		
Total net reductions to non-performing loans	(227)	(524)
Balance at the end of the year	1,853	1,329

Top 20 Non-Performing Loans. As of December 31, 2018, our 20 largest non-performing loans accounted for 42.7% of our total non-performing loan portfolio. The following table shows, as of that date, certain information regarding those loans:

	Gross principal outstanding	Allowance for credit losses	Collateral[1]	Industry
	(in billions of Won)			
Borrower A	145	140		Manufacturing
Borrower B	68	56	20	Manufacturing
Borrower C	55	20	40	Other
Borrower D	32	17		Shipping
Borrower E	29	15	23	Shipbuilding
Borrower F	29	24		Manufacturing
Borrower G	28	9		Construction
Borrower H	20	2	18	Real estate
Borrower I	18	4		Shipbuilding
Borrower J	18		18	Other
Borrower K	16	16		Other
Borrower L	16	3	15	Manufacturing
Borrower M	15	9	9	Manufacturing
Borrower N	15	1	13	Manufacturing
Borrower O	13	13		Construction
Borrower P	12		12	Manufacturing

Borrower Q	9	1	12	Manufacturing
Borrower R	9	3	6	Manufacturing
Borrower S	9			Other
Borrower T	9	7		Construction
Total	566	340	186	

(1) The value of collateral is appraised based on future cash flow and observable market price.

Non-Performing Loans and Impaired Loans

The term non-performing loan is used for our asset quality management in accordance with the Banking Industry Supervision Regulations of Korea, whereas the term impaired loan is used for financial reporting purposes based on our internal accounting policies in accordance with IFRS 9 (or IAS 39 for periods prior to 2018).

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Major differences between non-performing loans and impaired loans are as follows:

Item	Non-performing loans	Impaired loans
Relevant regulation or accounting principle	Banking Industry Supervision Regulations of Korea (loans classified as substandard, doubtful or estimated loss)	Our internal policy based on IFRS 9 (or IAS 39)
Scope	Loans	Loans (not including due from banks and other financial assets) under IFRS 9 (or loans and receivables (including due from banks and other receivables) under IAS 39)
Purchased impaired loans	Not included	Included
Loans classified as precautionary based on the Financial Services Commission s asset classification criteria	Not included	Loans classified as precautionary, for which the borrower has a capital deficit or its auditor s opinion on its financial statements is modified or qualified, are included

The following table shows, as of the dates indicated, the amounts of impaired loans and non-performing loans:

	As of December 31,		
	2016	2017	2018
	(in billions of Won)		
Impaired loans	2,554	2,237	1,621
Precautionary loans meeting the definition of impaired loans[1]	142	51	
Others	2,412	2,186	1,621
Non-performing loans	2,080	1,853	1,329

(1) Includes loans that are individually significant where the borrower has a capital deficit or its external auditor has expressed a qualified opinion or disclaimed its opinion on the borrower s financial statements.

Non-Performing Loan Strategy

One of our goals is to improve our asset quality, in part by reducing our non-performing loans. We have standardized the credit risk management systems of our subsidiaries to reduce our risks relating to future non-performing loans. Our credit rating systems are designed to prevent our subsidiaries from extending new loans to high-risk borrowers as determined by their credit rating. Our credit monitoring systems are designed to bring any sudden increase in a borrower s credit risk to the attention of our subsidiaries, which then closely monitor such loans. See Item 11. Quantitative and Qualitative Disclosures about Market Risk Credit Risk Management.

Each of our subsidiaries has one or more units that are responsible for managing non-performing loans. At Woori Bank, for example, the Credit Management and Collection Department and the Corporate Restoration Department generally oversee the process for resolving non-performing loans transferred to them by other Woori Bank business units. We believe that by centralizing the management of our non-performing loans within each subsidiary, we can become more effective in dealing with the issues relating to these loans by pooling institutional knowledge and creating a more specialized workforce.

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When a loan becomes non-performing, we will begin a due diligence review of the borrower s assets, send a notice demanding payment or stating that we will take legal action, and prepare for legal action. At the same time, we initiate our non-performing loan management process, which begins with:

- 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
- on a limited basis, identifying corporate loans subject to normalization efforts based on the cash-flow situation of the borrower.

Once we have confirmed the details of a non-performing loan, we make efforts to recover amounts owed to us. Methods for resolving non-performing loans include the following:

- commencing collection proceedings;
- commencing legal actions to seize collateral;
- writing off these amounts, transferring them to specific subsidiaries in charge of collections and authorizing those subsidiaries to recover what they can with respect to these amounts or to sell these loans to third parties; and
- with respect to large corporations, commencing or participating in voluntary workouts or restructurings mandated by Korean courts.

In addition to making efforts to collect on our non-performing loans, we also undertake measures to reduce the overall level of our non-performing loans. These measures include:

- selling our non-performing loans to structured companies established in connection with our joint ventures with several financial institutions; and
- selling our non-performing loans to third parties, including UAMCO.

See Sales of Non-Performing Loans. We generally expect to suffer a partial loss on loans that we sell or securitize, to the extent such sales and securitizations are recognized as such under IFRS.

Foreclosure and Collateral. We generally foreclose on mortgages or exercise our security interests in respect of other collateral if a collateralized obligation becomes overdue for more than three months. At that time, we will petition a court to foreclose on collateral and to sell that collateral through a court-supervised auction. Under Korean law, that petition must be filed with a court that has jurisdiction over the mortgaged property, and must be filed together with a copy of the mortgage agreement and an extract of the court registry regarding the subject property. The court will then issue an order to commence the foreclosure auction, which will be registered in the court registry of the subject property. If no bidder bids at least the minimum amount set by the court on the first auction date, the court will set another date for a subsequent auction approximately one month later. Each time a new auction date is set, the minimum auction price will be lowered by approximately 20%. Unlike laws relating to foreclosure in the United States, Korean law does not provide for non-judicial foreclosure. During 2016, 2017 and 2018, we foreclosed on collateral we obtained with respect to loan balances representing approximately 0.2%, 0.1% and 0.1% respectively, of our average interest-bearing loan balances in each of those periods.

Korean financial institutions, including us, maintain general policies to assess a potential customer s eligibility for loans based on that entity s credit quality, rather than requiring a particular level of collateral, especially in the case of large corporate borrowers. As a result, the ratio of our collateral to non-performing corporate loans is relatively low when compared with our total exposures. For secured consumer loans, however, we generally impose limits on loan amounts based on the collateral we receive. See Consumer Banking Lending Activities.

We reflect this collateral level when we estimate the future cash flow for our loans, which we calculate using a discounted cash flow method. With respect to loans to borrowers that we do not believe will be going concerns in the future, the lower collateral ratio has a direct effect on cash flow estimates and results in a higher level of allowances. With respect to loans to borrowers that we expect to be going concerns, the lower collateral ratio has an effect on cash flow estimates but we also consider other factors, including future operating income and future asset disposals and restructuring, in determining allowance levels. Accordingly, for these latter borrowers, the effect of lower collateral levels on allowances is mitigated by other characteristics of the borrower, and that lower collateral level will not necessarily result in a higher level of allowances.

Sales of Non-Performing Loans

The overall asset quality of our loan portfolio is affected by sales of non-performing loans. These sales have been made primarily to UAMCO and various structured companies as further described below.

The following table sets forth information regarding our sales of loans for the periods indicated:

	Year Ended December 31,								
	2016			2017			2018		
Purchaser	**Net Carrying Amount[1]**	**Sale Price**	**Gain (Loss)**	**Net Carrying Amount[1]**	**Sale Price**	**Gain (Loss)**	**Net Carrying Amount[1]**	**Sale Price**	**Gain (Loss)**
	(in billions of Won)								
Structured companies	213	244	31	260	273	13	155	197	42
UAMCO	66	78	12						
Others[2]	218	259	41					19	19
Total	497	581	84	260	273	13	155	216	61

(1) Net carrying amount represents the net value of non-performing loans after deduction of allowance for credit losses on such basis.

(2) Includes 5 million of sales to Korea Asset Management Corporation in 2018, which may be subject to repurchase by us.

United Asset Management Corp. UAMCO was established in late 2009 in the wake of the global financial crisis by six major commercial banks in Korea, including Woori Bank, to purchase, sell and securitize non-performing loans and to engage in corporate restructuring activities, among other things. Currently, Woori Bank and six other banks each hold a 14% equity interest in UAMCO, while one other bank holds a 2% equity interest. Woori Bank has committed to contribute approximately 142 billion of capital to UAMCO, of which approximately 87 billion has been contributed to date. Upon the fulfillment of such capital contribution commitments from Woori Bank and the seven other banks, UAMCO may request a loan from the seven banks holding a 14% equity interest in UAMCO, which includes Woori Bank, of up to a combined 2 trillion, upon which such seven banks must use their best efforts to fulfill such request pro rata to their ownership interests. Therefore, we have neither control nor significant influence over UAMCO.

Pursuant to a memorandum of understanding among the Financial Services Commission and seven banks, including Woori Bank, a private equity fund was established in June 2011 to acquire approximately 1.2 trillion of non-performing bank loans to construction companies in workout, restructuring or rehabilitation. The general partner of the fund is UAMCO and the limited partners consist of the seven banks and other investors. The fund purchases non-performing bank loans at market price and the funds required to purchase such loans are contributed or lent by the same banks that sell such loans to the fund. In June 2011, Woori Bank agreed to make a capital commitment of 148 billion and provide a 109 billion revolving loan facility to the fund. From June to December 2011, Woori Bank contributed the entire amount of its capital commitment to the fund in connection with its purchase of 443 billion of non-performing loans from Woori Bank. In 2012, Woori Bank made an additional capital contribution of 44 billion to the fund in connection with its purchase of 44 billion of non-performing loans from Woori Bank. We have determined that we have significant influence over the private equity fund.

Under the terms of our sale of loans to UAMCO and the private equity fund, we are not required to repurchase any such loans, provide post-sale price adjustments or otherwise continue to be involved with such loans subsequent to their sale in any material respect. In addition, UAMCO and the private equity fund have the practical ability to sell non-performing loans in their entirety to unrelated third parties and are able to exercise such ability unilaterally without the need to impose additional restrictions, notwithstanding our ownership interest. Therefore, we believe we have not retained control over the transferred assets, and non-performing loans sold to UAMCO in 2016, 2017 and 2018 were derecognized in accordance with IAS 39 or IFRS 9, as applicable.

Structured companies. We transfer non-performing loans to structured companies, of which we do not have control over the significant operations. Most of the structured companies are investment funds that specialize in acquiring non-performing loans from Korean financial institutions, including us. In addition, we have not provided any financial guarantees or credit facilities nor invested in any such investment funds. As such, we believe that we have transferred substantially all of the risks and rewards of the relevant non-performing loans to the structured companies and have derecognized all non-performing loans that were transferred to structured companies in 2016, 2017 and 2018.

Others. In addition to sales of loans to UAMCO and various structured companies, we sell non-performing loans to various private investment companies. Pursuant to the terms of such sales to private investment companies, we are not required to repurchase any such loans, provide post-sale price adjustments or otherwise continue to be involved with such loans subsequent to their sale in any material respect.

Allocation and Analysis of Allowances for Credit Losses

The following table presents, as of the dates indicated, the allocation of our allowances for credit losses by loan type:

	As of December 31,									
	2014		2015		2016		2017		2018	
	(in billions of Won, except percentages)									
Domestic										
Corporate										
Commercial and industrial	1,781	68.3%	1,297	63.2%	975	52.7%	893	50.4%	863	48.5%
Lease financing							1	0.1	1	0.1
Trade financing	151	5.8	217	10.6	277	14.9	297	16.8	171	9.6
Other commercial	157	6.0	135	6.6	183	9.8	143	8.0	130	7.3
Total corporate	2,089	80.1	1,649	80.4	1,435	77.4	1,334	75.3	1,165	65.5
Consumer										
General purpose household[(1)]	301	11.5	184	9.0	149	8.0	187	10.6	258	14.5
Mortgage	19	0.7	11	0.5	9	0.5	11	0.6	19	1.1
Total consumer	320	12.2	195	9.5	158	8.5	198	11.2	277	15.6
Credit cards	129	4.9	146	7.1	155	8.4	182	10.3	260	14.6
Total domestic	2,538	97.2	1,990	97.0	1,748	94.3	1,714	96.8	1,702	95.7
Foreign										

Corporate										
Commercial and industrial	56	2.2	44	2.2	92	5.0	39	2.2	53	3.0
Trade financing	4	0.2	4	0.2	1	0.1	3	0.2	3	0.2
Other commercial			3	0.1	1	0.1	7	0.4	5	0.3
Total corporate	60	2.4	51	2.5	94	5.2	49	2.8	61	3.5
Consumer	11	0.4	10	0.5	9	0.5	7	0.4	15	0.8
Total foreign	71	2.8	61	3.0	103	5.7	56	3.2	76	4.3
Total allowance for credit losses[2]	2,609	100.0%	2,051	100.0%	1,851	100.0%	1,770	100.0%	1,778	100.0%

(1) Includes home equity loans.
(2) Not including due from banks and other financial assets (or other receivables).

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The following table presents an analysis of the changes in our allowances for credit losses for each of the years indicated:

	Year ended December 31,				
	2014	2015	2016	2017	2018[4]
	(in billions of Won)				
Balance at the beginning of the year[1]	3,337	2,609	2,051	1,851	2,018
Bad debt expenses for the period	1,076	1,029	822	896	375
Increase on repurchases of non-performing loans					
Gross charge-offs					
Domestic					
Corporate					
Commercial and industrial	(1,037)	(1,016)	(613)	(352)	(239)
Lease financing					
Trade financing	(62)	(82)	(67)	(29)	(26)
Other commercial	(68)	(30)	(19)	(39)	(6)
Total corporate	(1,167)	(1,128)	(699)	(420)	(271)
Consumer					
General purpose household[2]	(113)	(237)	(152)	(143)	(201)
Mortgage	(2)	(3)	(3)	(4)	(3)
Total consumer	(115)	(240)	(155)	(147)	(204)
Credit cards	(163)	(198)	(242)	(228)	(243)
Total domestic	(1,445)	(1,566)	(1,096)	(795)	(718)
Foreign	(7)	(11)	(23)	(37)	(18)
Allowances relating to loans sold	(150)	(141)	(115)	(66)	(52)
Total gross charge-offs	(1,602)	(1,718)	(1,234)	(898)	(788)
Recoveries:					
Domestic					
Corporate					
Commercial and industrial	53	158	153	65	98
Lease financing					
Trade financing	6	19	18	6	11
Other commercial	6	20	21	14	17
Total corporate	65	197	192	85	126
Consumer					
General purpose household[2]	6	16	29	25	29
Mortgage	3	13	25	20	23
Total consumer	9	29	54	45	52
Credit cards	28	34	44	51	57

Total domestic	102	260	290	181	235
Foreign	1	1		1	2
Total recoveries	103	261	290	182	237
Net charge-offs	(1,499)	(1,457)	(944)	(716)	(551)
Foreign exchange translation effects	1		1	(3)	
Others[3]	(306)	(130)	(79)	(258)	(64)
Balance at the end of the year	2,609	2,051	1,851	1,770	1,778
Ratio of net charge-offs during the period to average loans outstanding during the period	0.8%	0.7%	0.4%	0.3%	0.2%

(1) The application of IFRS 9 resulted in a one-off increase of 248 billion in the opening balance of allowances for loan losses as of January 1, 2018. See Notes 2-(1)-1)-b) and 10-(8) of the notes to our consolidated financial statements.

(2) Includes home equity loans.

(3) Includes unwinding of discount.

(4) See Note 10-(6) of the notes to our consolidated financial statements for changes in allowance for loan losses according to stages of credit risk deterioration of financial assets.

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Loan Charge-Offs

The credit approval process we have implemented includes assessing credit risk before extending loans and monitoring outstanding loans, in order to minimize loans that must be charged off. To the extent charge-offs are required, we follow charge-off policies aimed at maximizing accounting transparency, minimizing any waste of resources in managing loans which have a low probability of being collected and reducing our non-performing loan ratio.

Loans To Be Charged Off. We charge off loans that are deemed to be uncollectible by virtue of their falling under any of the following categories:

- loans for which collection is not foreseeable due to insolvency, bankruptcy, compulsory execution, disorganization, dissolution or the shutting down of the business of the debtor;
- loans for which collection is not foreseeable due to the death or disappearance of the debtor;
- loans for which expenses of collection exceed the collectable amount;
- loans on which collection is not possible through legal or any other means;
- payments in arrears in respect of credit cards that have been overdue for more than four payment cycles and have been classified as estimated loss (excluding instances where there has been partial payment of the overdue balance, where a related balance is not overdue or where a charge off is not possible due to Korean regulations), and those that have been overdue for more than six months;
- payments outstanding on corporate and consumer loans (other than credit card receivables) that have been overdue for more than 12 months, and those on unsecured consumer loans that have been overdue for more than six months; or
- the portion of loans classified as estimated loss, net of any recovery from collateral, which is deemed to be uncollectible.

Procedure for Charge-off Approval. In order to charge off corporate loans, in the case of Woori Bank, an application for a charge-off must be submitted by a branch to the Credit Management and Collection Department promptly and, in any event, within one month after the corporate loan is classified as estimated loss. The department evaluates and approves the application. Then, Woori Bank must seek an approval from the Financial Supervisory Service for its charge-offs, which is typically granted. At the same time, Woori Bank refers the approval of the charge-off by the Credit Management and Collection Department to its Audit Committee for review to ensure compliance with its internal procedures for charge-offs, which include consultations with the branch submitting the charge-off application. Once Woori Bank receives approval from the Financial Supervisory Service, Woori Bank must also obtain approval from its senior management to charge off those loans.

With respect to unsecured consumer loans and credit card balances, we follow a different process to determine which unsecured consumer loans and credit card balances should be charged-off, based on the length of time those loans or balances are past due. We charge off unsecured consumer loans which are 12 months overdue and credit card balances which have been overdue for more than four payment cycles and have been classified as estimated loss (excluding instances where there has been partial payment of the overdue balance, where a related balance is not overdue or where a charge off is not possible due to Korean regulations).

Treatment of Loans Charged Off. Once loans are charged off, we classify them as charged-off loans. In the case of Woori Bank, these loans are then transferred to our wholly-owned subsidiary, Woori Credit Information, which is in charge of collections. It will attempt to recover amounts owed or to sell these loans to third parties.

In the case of collateralized loans, our general policy is to petition a court to foreclose and sell the collateral through a court-supervised auction if a collateralized loan becomes overdue for more than three months. If a debtor still fails to repay and the court grants its approval for foreclosure, we will sell the collateral, net of expenses incurred from the auction.

Credit Rehabilitation Programs for Delinquent Consumer Borrowers

In light of the rapid increase in delinquencies in credit card and other consumer credit in recent years, and concerns regarding potential social issues posed by the growing number of individuals with bad credit, the Korean 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 our collections and recoveries on our delinquent consumer credits.

In 2002, the Financial Services Commission established the Credit Counseling and Recovery Service based upon an agreement among approximately 160 financial institutions in Korea. Upon application to the Credit Counseling and Recovery Service and approval by creditor financial institutions representing a majority of the outstanding unsecured debt and two-thirds of the outstanding secured debt, a qualified credit delinquent person with outstanding debts to two or more financial institutions in an aggregate amount not exceeding 500 million may participate in an individual work-out program designed to restructure such person s debt and rehabilitate such person s credit. The aggregate amount of loans of Woori Bank which became subject to such individual work-out programs in 2018 was 70 billion. In 2018, Woori Bank recovered approximately 7 billion with respect to its loans subject to such individual work-out programs.

Under the Korean Debtor Recovery and Bankruptcy Law, 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. The aggregate amount of loans of Woori Bank which became subject to such court-supervised debt restructuring in 2018 was 287 billion. In 2018, Woori Bank recovered 32 billion with respect to its loans subject to such court-supervised debt restructuring.

In September 2008, to support consumer borrowers with low credit scores, the Financial Services Commission established the Credit Rehabilitation Fund to purchase from creditors the loans of such borrowers that are in default and to provide guarantees so that such loans may be refinanced at lower rates. The Credit Rehabilitation Fund provides support to (i) individuals with low credit scores who are in default on loans not exceeding 50 million in principal amount in the aggregate (which requirement will be waived for individuals who are basic living welfare recipients) for a period of three months or more and (ii) individuals with low credit scores ranging from category 6 to 10 who are in default on loans not exceeding 30 million in principal amount in the aggregate (which requirement will be waived for individuals who are basic living welfare recipients) and the interest rate of which is 30% or more.

In March 2009, the Financial Services Commission requested Korean banks, including Woori Bank, to establish a pre-workout program, including a credit counseling and recovery service, for retail borrowers with outstanding short-term debt. Under the pre-workout program, maturity extensions and/or interest rate adjustments are provided to retail borrowers with total loans of less than 1.5 billion (consisting of no more than 500 million of unsecured loans and 1 billion of secured loans) who are in arrears on their payments for more than 30 days but less than 90 days. The aggregate amount of consumer credit (including credit card receivables) Woori Bank provided which became subject to the pre-workout program in 2018 was 37 billion. See Item 3.D. Risk Factors Risks relating to our consumer credit portfolio We may experience increases in delinquencies in our consumer loan and credit card portfolios.

Securities Investment Portfolio

Investment Policy

We invest in and trade Won-denominated securities and, to a lesser extent, foreign currency-denominated securities for our own account to:

- maintain asset stability and diversification;
- maintain adequate sources of back-up liquidity to match funding requirements; and
- supplement income from core lending activities.

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In making securities investments, we take into account a number of factors, including external broker analyses and internal assessments of macroeconomic trends, industry analysis, credit evaluation, maturity and trading history in determining whether to make a particular investment.

Our investments in debt securities include primarily bonds issued by government-related entities, as well as corporate bonds that have been guaranteed by banks (other than merchant banks), government-related funds or privately capitalized funds that we consider to have a low credit risk.

Our securities investments are subject to various regulations, including limitations prescribed under the Financial Holding Company Act and the Bank Act. Under these regulations, a financial holding company may not own (i) more than 5% of the total issued and outstanding shares of another finance-related company, (ii) any shares of its affiliates, other than its direct or indirect subsidiaries, or (iii) any shares of a non-finance-related company. In addition, a bank must limit its investments in equity securities and bonds with a maturity in excess of three years (other than monetary stabilization bonds issued by the Bank of Korea and Korean government bonds) to 100% of the sum of its total Tier I and Tier II capital amount (less any capital deductions). A bank is also generally prohibited from acquiring more than 15% of the shares with voting rights issued by any other corporation, subject to certain exceptions. Pursuant to the Bank Act, a bank and its trust accounts are prohibited from acquiring the shares of a major shareholder (for the definition of major shareholder, see Supervision and Regulation Principal Regulations Applicable to Banks Financial Exposure to Any Individual Customer or Major Shareholder) of that bank in excess of an amount equal to 1% of the sum of the bank s Tier I and Tier II capital (less any capital deductions). Further information on the regulatory environment governing our investment activities is set out in Supervision and Regulation Principal Regulations Applicable to Financial Holding Companies Liquidity, Supervision and Regulation Principal Regulations Applicable to Financial Holding Companies Restrictions on Shareholdings in Other Companies, Supervision and Regulation Principal Regulations Applicable to Banks Liquidity and Supervision and Regulation Principal Regulations Applicable to Banks Restrictions on Shareholdings in Other Companies.

Our investments in foreign currencies are subject to certain limits and restrictions specified in our internal guidelines relating to country exposure, a single issuer and type of security exposure, and total investments by individual business groups.

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Book Value and Fair Value

The following table sets out the book value and fair value of securities in our portfolio as of the dates indicated:

	As of December 31,					
	2016		2017		2018	
	Book Value	Fair Value	Book Value	Fair Value	Book Value	Fair Value
	(in billions of Won)					
Financial assets at fair value through profit or loss (IFRS 9/IAS 39)						
Financial assets at fair value through profit or loss mandatorily measured at fair value/Financial assets held for trading						
Equity securities	36	36	22	22	878	878
Beneficiary certificates	24	24	13	13	985	985
Others	4	4				
Debt securities						
Korean treasury and government agencies	519	519	540	540	516	516
Financial institutions	1,445	1,445	1,477	1,477	534	534
Corporate	681	681	627	627	775	775
Sub-total	2,709	2,709	2,679	2,679	3,688	3,688
Financial assets designated at fair value through profit or loss[(1)]						
Debt securities	4	4	10	10		
Equity securities	13	13	13	13		
Sub-total	17	17	23	23		
Total	2,726	2,726	2,702	2,702	3,688	3,688
Financial assets at fair value through other comprehensive income/Available-for-sale financial assets						
Equity securities	1,454	1,454	1,411	1,411	951	951
Beneficiary certificates	2,822	2,822	713	713		
Others	494	494	170	170	40	40
Debt securities						
Korean treasury and government agencies	3,789	3,789	2,331	2,331	1,358	1,358
Financial institutions	6,314	6,314	5,217	5,217	11,253	11,253
Corporate	4,409	4,409	2,725	2,725	1,825	1,825
Asset backed securities	249	249	308	308		
Foreign currency bonds	1,212	1,212	2,443	2,443	2,636	2,636
Others	75	75	35	35		

Total	20,818	20,818	15,353	15,353	18,063	18,063
Securities at amortized cost/Held-to-maturity financial assets						
Debt securities						
Korean treasury and government agencies	3,754	3,774	3,995	3,987	7,523	7,575
Financial institutions	5,169	5,173	7,245	7,233	9,475	9,494
Corporate	4,823	4,874	5,312	5,299	5,707	5,732
Foreign currency bonds	164	164	197	197	234	233
Total	13,910	13,985	16,749	16,716	22,939	23,034
Total securities	37,454	37,529	34,804	34,771	44,690	44,785

(1) Effective as of January 1, 2018, financial assets designated at fair value through profit or loss have been reclassified as financial assets at fair value through profit or loss mandatorily measured at fair value, pursuant to the application of IFRS 9. See Notes 2-(1)-1)-a) and 7 of the notes to our consolidated financial statements.

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Maturity Analysis

The following table categorizes our debt securities by maturity and weighted average yield as of December 31, 2018:

	As of December 31, 2018									
	Within 1 year		Over 1 but Within 5 years		Over 5 but Within 10 years		Over 10 years		Total	
	(in billions of Won, except percentages)									
	Amount	Weighted Average Yield(1)	Amount	Weighted Average Yield(1)	Amount	Weighted Average Yield(1)	Amount	Weighted Average Yield(1)	Amount	Weighted Average Yield(1)
Financial assets at fair value through profit or loss										
Korean treasury and government agencies	146	1.92%	249	2.00%	121	1.77%		%	516	1.92%
Financial institutions	242	1.91	251	2.00	41	2.65			534	2.01
Corporate	472	2.48	302	2.23					775	2.38
Total	860	2.22%	802	2.09%	162	1.99%		%	1,825	2.14%
Financial assets at fair value through other comprehensive income										
Korean treasury and government agencies	784	2.10%	520	2.07%	50	2.09%	4	3.25%	1,358	2.09%
Financial institutions	4,282	1.92	6,971	2.13					11,253	2.05
Corporate	711	2.31	1,022	2.68	92	2.55			1,825	2.53
Foreign currency bonds	1,240	1.80	1,263	1.95	39	5.81	94	2.35	2,636	1.95
Total	7,017	1.96%	9,776	2.16%	181	3.13%	98	2.38%	17,072	2.09%
Securities at amortized cost										
Korean treasury and government agencies	1,353	2.21%	6,144	2.17%	26	3.88%		%	7,523	2.18%
Financial institutions	5,014	1.83	4,461	2.25					9,475	2.03
Corporate	1,545	2.75	3,762	2.44	280	2.57	120	1.99	5,707	2.52
Foreign currency bonds	51	1.17	98	3.27	34	2.83	51	6.25	234	3.41
Total	7,963	2.07%	14,465	2.27%	340	2.70%	171	3.27%	22,939	2.21%

(1) The weighted average yield for the portfolio represents the yield to maturity for each individual security, weighted using its book value (which is the amortized cost in the case of financial assets at amortized cost and the fair value in the case of financial assets at fair value through other comprehensive income and financial assets at fair value through profit or loss).

Risk Concentrations

As of December 31, 2018, we held the following securities of individual issuers where the aggregate book value of those securities exceeded 10% of our owners equity at such date. As of December 31, 2018, our owners equity was 21,740 billion.

	As of December 31, 2018	
	Book Value	**Market Value**
	(in billions of Won)	
Name of issuer:		
The Korea Development Bank	9,424	9,439
Korean government	9,171	9,222
The Bank of Korea	7,044	7,045
Korea Housing Finance Corporation	2,241	2,251
Total	27,880	27,957

The Korea Development Bank, The Bank of Korea and Korea Housing Finance Corporation are Korean government entities.

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Funding

We fund our lending and other activities using various sources, both domestic and foreign. Our primary funding strategy is to maintain stable and low-cost funding. We have in the past achieved this in part by increasing the average balances of low-cost customer deposits, in particular demand deposits and savings deposits.

Customer deposits are our principal funding source. Customer deposits accounted for 82.8% of our total funding as of December 31, 2016, 82.7% of our total funding as of December 31, 2017 and 82.7% of our total funding as of December 31, 2018.

We also acquire funding through the following sources:

- long-term debt, including the issuance of senior and subordinated debentures and borrowings from government-affiliated funds and entities and other financial institutions;

- short-term borrowings, including borrowings from our trust accounts and from the Bank of Korea, and call money; and

- the issuance of hybrid securities, including bond-type hybrid securities.

As of December 31, 2018, approximately 87.9% of our total funding was denominated in Won.

Deposits

Although the majority of our deposits are short-term, it has been our experience that the majority of our depositors generally roll over their deposits at maturity, providing us with a stable source of funding. See Item 3.D. Risk Factors Other risks relating to our business Our funding is highly dependent on short-term deposits, which dependence may adversely affect our operations. The following table shows the average balances of our deposits and the average costs of our deposits for the periods indicated:

	For the year ended December 31,					
	2016		2017		2018	
	Average Balance(1)	Average Cost	Average Balance(1)	Average Cost	Average Balance(1)	Average Cost
	(in billions of Won, except percentages)					
Demand deposits	9,742	0.78%	8,319	0.63%	8,512	0.60%
Time deposits and savings deposits	181,073	1.20	186,277	1.08	196,806	1.23
Certificates of deposit	3,476	1.70	4,553	1.71	5,091	2.04
Other deposits(2)	23,405	1.05	24,444	0.99	26,254	1.31
Average total deposits	217,696	1.17%	223,593	1.06%	236,663	1.23%

(1) Average balances are based on daily balances for Woori Bank and on quarterly balances for all of our other subsidiaries and our structured companies.

(2) Mutual installment deposits are interest-bearing deposits offered by us, which enable customers to become eligible to apply for loans secured by such deposits while they maintain an account with us. In order to qualify to apply for such a loan, a customer must make required periodic deposits to the mutual installment account for a contracted term of less than five years. Any such loan will be secured in an amount up to the holder s mutual installment deposit and will be subject to the same loan underwriting policy we apply for other secured loans. For the portion of the loan, if any, that is not secured, we apply the same loan underwriting policy as we would for other unsecured loans.

For a description of our retail deposit products, see Business Consumer Banking Lending Activities Mortgage and Home Equity Lending and Business Consumer Banking Deposit-Taking Activities.

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Maturities of Certificates of Deposit and Other Time Deposits

The following table presents, as of December 31, 2018, the remaining maturities of our certificates of deposit and other time deposits which had fixed maturities in excess of 100 million:

	As of December 31, 2018		
	Certificates of Deposit	Other Time Deposits	Total
	(in billions of Won)		
Maturing within three months	1,125	24,740	25,865
After three but within six months	2,388	24,164	26,552
After six but within 12 months	2,827	50,127	52,954
After 12 months	61	3,516	3,577
Total	6,401	102,547	108,948

Long-Term Debt

The aggregate amount of contractual maturities of all long-term debt, which consists of debentures and borrowings with original maturities exceeding one year, as of December 31, 2018 was as follows:

	Amount (in billions of Won)
Due in 2019	15,132
Due in 2020	9,659
Due in 2021	5,204
Due in 2022	3,499
Due in 2023	2,238
Thereafter	2,584
Gross long-term debt	38,317
Less: discount	(29)
Total long-term debt, net	38,288

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Short-Term Borrowings

The following table presents, for the periods indicated, information regarding our short-term borrowings, with an original maturity of one year or less:

	As of and for the year ended December 31,		
	2016	2017	2018
	(in billions of Won, except percentages)		
Call money			
Year-end balance	1,927	635	975
Average balance(1)	1,991	1,527	1,047
Maximum balance	3,250	3,375	1,540
Average interest rate(2)	1.3%	2.0%	2.0%
Year-end interest rate	0.0~5.1%	1.5~2.7%	0.0~7.3%
Borrowings from the Bank of Korea(3)			
Year-end balance	1,599	1,404	1,335
Average balance(1)	1,474	1,402	1,421
Maximum balance	1,608	1,457	1,468
Average interest rate(2)	0.7%	0.7%	0.7%
Year-end interest rate	0.5~0.8%	0.5~0.8%	0.5~0.8%
Other short-term borrowings (4)			
Year-end balance	5,974	6,750	8,087
Average balance(1)	7,192	7,087	8,006
Maximum balance	9,722	7,694	8,859
Average interest rate(2)	1.3%	1.4%	1.8%
Year-end interest rate	0.01~2.9%	0.01~5.0%	0.05~6.4%

(1) Average balances are based on monthly balances.
(2) Average interest rates for the year are calculated by dividing the total interest expense 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 include borrowings from trust accounts, bills sold, borrowings in domestic and foreign currency, short-term secured borrowings and foreign currency debentures. Other short-term borrowings have maturities of 30 days to one year and are unsecured.

Supervision and Regulation

Principal Regulations Applicable to Financial Holding Companies

General

The Financial Holding Company Act, last amended on December 31, 2018, regulates Korean financial holding companies and their subsidiaries. The entities that regulate and supervise Korean financial holding companies and their subsidiaries are the Financial Services Commission and the Financial Supervisory Service.

The Financial Services Commission exerts direct control over financial holding companies pursuant to the Financial Holding Company Act. Among other things, the Financial Services Commission approves the establishment of financial holding companies, issues regulations on the capital adequacy of financial holding companies and their subsidiaries, and drafts regulations relating to the supervision of financial holding companies.

Following the instructions and directives of the Financial Services Commission, the Financial Supervisory Service supervises and examines financial holding companies and their subsidiaries. In particular, the Financial Supervisory Service sets requirements relating to Korean financial holding companies liquidity and capital adequacy ratios and establishes reporting requirements within the authority delegated under the Financial Services Commission regulations. Financial holding companies must submit quarterly reports to the Financial Supervisory Service discussing business performance, financial status and other matters identified in the Enforcement Decree of the Financial Holding Company Act.

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Under the Financial Holding Company Act, a financial holding company is a company which primarily engages in controlling its subsidiaries by holding equity stakes in them equal in aggregate to at least 50% of the financial holding company s aggregate assets based on its balance sheet as of the end of the immediately preceding fiscal year. A company is required to obtain approval from the Financial Services Commission to become a financial holding company.

A financial holding company may engage only in controlling the management of its subsidiaries, as well as certain ancillary activities including:

- financially supporting its direct and indirect subsidiaries;
- raising capital necessary for investment in its subsidiaries or providing financial support to its direct and indirect subsidiaries;
- supporting the business of its direct and indirect subsidiaries, including the development and marketing of financial products;
- providing data processing, legal, accounting and other resources and services that have been commissioned by its direct and indirect subsidiaries so as to support their operations; and
- any other businesses exempted from authorization, permission or approval under the applicable laws and regulations.

The Financial Holding Company Act requires every financial holding company (other than a financial holding company that is controlled by another financial holding company) and its subsidiaries to obtain prior approval from the Financial Services Commission before acquiring control of another company or to file a report with the Financial Services Commission within 30 days thereafter in certain cases (including acquiring control of another company whose assets are less than 100 billion as of the end of the immediately preceding fiscal year). In addition, the Financial Services Commission must grant permission to liquidate or to merge with any other company before the liquidation or merger. A financial holding company must report to the Financial Services Commission when certain events, including the following, occur:

- when the largest shareholder changes;
- in the case of a bank holding company, when a major investor changes;
- when the shareholding of the controlling shareholder (i.e., the largest shareholder or a principal shareholder, each as defined in the Financial Holding Company Act) or a person who has a special relationship with such controlling shareholder (as defined in the Enforcement Decree of the Financial Holding Company Act)

changes by 1% or more of the total issued and outstanding voting shares of the financial holding company;

when it changes its corporate name;

when there is a cause for its dissolution; and

when it or its subsidiaries cease to control any of their respective direct or indirect subsidiaries by disposing of their shares of such direct or indirect subsidiary.

Capital Adequacy

The Financial Holding Company Act does not provide for a minimum paid-in capital requirement related to financial holding companies. However, all financial holding companies are required to maintain a specified level of solvency. In addition, with respect to the allocation of net profit earned in a fiscal term, a financial holding company must set aside in its legal reserve an amount equal to at least 10% of its net income after tax each time it pays dividends on its net profits earned until its legal reserve reaches at least the aggregate amount of its paid-in capital.

A bank holding company, which is a financial holding company controlling banks or other financial institutions conducting banking business as prescribed in the Financial Holding Company Act, was required to maintain a total minimum consolidated capital adequacy ratio of 10.625% (including applicable additional capital buffers and requirements as described below) as of December 31, 2018, and such ratio increased to 11.5% as of January 1, 2019. Consolidated capital adequacy ratio is defined as the ratio of equity capital as a percentage of risk-weighted assets on a consolidated basis, determined in accordance with the Financial Services Commission requirements that have been formulated based on Bank of International Settlements standards. Equity capital, as applicable to bank holding companies, is defined as the sum of common equity Tier I capital, additional Tier I capital and Tier II capital less any deductible items, each as defined under the Regulation on the Supervision of Financial Holding Companies. Risk-weighted assets is defined as the sum of credit risk-weighted assets and market risk-weighted assets.

Pursuant to amended regulations promulgated by the Financial Services Commission commencing in 2013 to implement Basel III, Korean bank holding companies were required to maintain a minimum ratio of common equity Tier I capital to risk-weighted assets of 3.5% and Tier I capital to risk-weighted assets of 4.5% from December 1, 2013, which minimum ratios were increased to 4.0% and 5.5%, respectively, from January 1, 2014 and increased further to 4.5% and 6.0%, respectively, from January 1, 2015. Such requirements are in addition to the pre-existing requirement for a minimum ratio of Tier I and Tier II capital (less any capital deductions) to risk-weighted assets of 8.0%, which remains unchanged. The amended regulations also require an additional capital conservation buffer of 1.875% in 2018 and 2.5% in 2019, as well as a potential counter-cyclical capital buffer of up to 2.5%, which is determined on a quarterly basis by the Financial Services Commission. Furthermore, bank holding companies designated as one of four domestic systemically important banks for 2018 by the Financial Services Commission were subject to an additional capital requirement of 0.75% in 2018. Bank holding companies so designated for 2019 are subject to an additional capital requirement of 1.0% in 2019.

Liquidity

All financial holding companies are required to match the maturities of their assets and liabilities on a non-consolidated basis in accordance with the Financial Holding Company Act in order to ensure liquidity. Financial holding companies must:

- maintain a Won liquidity ratio (defined as Won assets due within one month, including marketable securities, divided by Won liabilities due within one month) of not less than 100% on a non-consolidated basis;

- maintain a foreign currency liquidity ratio (defined as foreign currency liquid assets due within three months divided by foreign currency liabilities due within three months) of not less than 80% on a non-consolidated basis (except that such requirement is not applicable to a financial holding company whose foreign currency liabilities constitute less than 1% of its total assets);

- maintain a ratio of foreign currency liquid assets due within seven days less foreign currency liabilities due within seven days as a percentage of total foreign currency assets of not less than 0% on a non-consolidated basis (except that such requirement is not applicable to a financial holding company whose foreign currency liabilities constitute less than 1% of its total assets);

maintain a ratio of foreign currency liquid assets due within a month less foreign currency liabilities due within a month as a percentage of total foreign currency assets of not less than negative 10% on a non-consolidated basis (except that such requirement is not applicable to a financial holding company whose foreign currency liabilities constitute less than 1% of its total assets); and

make quarterly reports regarding their Won liquidity and foreign currency liquidity to the Financial Supervisory Service.

Financial Exposure to Any Individual Customer and Major Investor

Subject to certain exceptions, the aggregate credit (as defined in the Financial Holding Company Act, the Bank Act, the Financial Investment Services and Capital Markets Act, the Insurance Business Act, the Mutual Savings Bank Act and the Specialized Credit Financial Business Act, respectively) of a financial holding company and its direct and indirect subsidiaries that are banks, merchant banks, financial investment companies, insurance companies, savings banks or specialized credit financial business companies (which we refer to as Financial Holding Company Total Credit) to a single group of companies that belong to the same conglomerate as defined in the Monopoly Regulations and Fair Trade Act will not be permitted to exceed 25% of net aggregate equity capital (as defined below).

Net aggregate equity capital is defined under the Enforcement Decree of the Financial Holding Company Act as the sum of:

(1) in case of a financial holding company, the capital amount as defined in Article 24-3(7), Item 2 of the Enforcement Decree of the Financial Holding Company Act;

(2) in case of a bank, the capital amount as defined in Article 2(1), Item 5 of the Bank Act;

(3) in case of a merchant bank, the capital amount as defined in Article 342(1) of the Financial Investment Services and Capital Markets Act;

(4) in case of a financial investment company, the capital amount as defined in Article 37(3) of the Enforcement Decree of the Financial Investment Services and Capital Markets Act;

(5) in case of an insurance company, the capital amount as defined in Article 2, Item 15 of the Insurance Business Act;

(6) in case of a savings bank, the capital amount as defined in Article 2, Item 4 of the Mutual Savings Bank Act; and

(7) in case of a specialized credit financial business company, the capital amount as defined in Article 2, Item 19 of the Specialized Credit Financial Business Act;

less the sum of:

(1) the amount of shares of direct and indirect subsidiaries held by the financial holding company;

(2) the amount of shares that are cross-held by each direct and indirect subsidiary that is a bank, merchant bank, financial investment company, insurance company, savings bank or specialized credit financial business company; and

(3) the amount of shares of a financial holding company held by such direct and indirect subsidiaries that are banks, merchant banks, financial investment companies, insurance companies, savings banks or specialized credit financial business companies.

The Financial Holding Company Total Credit to a single individual or judicial person may not exceed 20% of the net aggregate equity capital. In addition, the Financial Holding Company Total Credit to a shareholder holding (together with the persons who have a special relationship with the shareholder, as defined in the Enforcement Decree of the Financial Holding Company Act) in aggregate more than 10% of the total issued and outstanding voting shares of a financial holding company generally may not exceed the lesser of (x) 25% of the net aggregate equity capital and (y) the amount of the equity capital of the financial holding company multiplied by the shareholding ratio of the shareholder (together with the persons who have a special relationship with the shareholder).

Further, the total sum of credits (as defined in the Financial Holding Company Act, the Bank Act, the Financial Investment Services and Capital Markets Act, the Insurance Business Act, the Mutual Savings Bank Act and the Specialized Credit Financial Business Act, respectively) of a bank holding company and its direct and indirect subsidiaries that are banks, merchant banks, financial investment companies, insurance companies, savings banks or specialized credit financial business companies as applicable (which we refer to as Bank Holding Company Total Credit) extended to a major investor (as defined below) (together with the persons who have a special relationship with that major investor) will not be permitted to exceed the lesser of (x) 25% of the net aggregate equity capital and (y) the amount of the equity capital of the bank holding company multiplied by the shareholding ratio of the major investor, except for certain cases.

Major investor is defined as:

- a shareholder holding (together with persons who have a special relationship with that shareholder), in excess of 10% (or in the case of a bank holding company controlling regional banks only, 15%) in the aggregate of the bank holding company s total issued and outstanding voting shares; or

- a shareholder holding (together with persons who have a special relationship with that shareholder), more than 4% in the aggregate of the total issued and outstanding voting shares of the bank holding company controlling nationwide banks, where the shareholder is the largest shareholder or has actual control over the major business affairs of the bank holding company through, for example, appointment and dismissal of the officers pursuant to the Enforcement Decree of the Financial Holding Company Act.

In addition, the total sum of the Bank Holding Company Total Credit granted to all of a bank holding company s major investor must not exceed 25% of the bank holding company s net aggregate equity capital. Furthermore, any bank holding company that, together with its direct and indirect subsidiaries, intends to extend credit to the bank holding company s major investor in an amount equal to or exceeding the lesser of (x) the amount equivalent to 0.1% of the net aggregate equity capital and (y) 5 billion, in any single transaction, must obtain prior unanimous board resolutions and then, immediately after providing the credit, must file a report to the Financial Services Commission and publicly disclose the filing of the report.

Restrictions on Transactions Among Direct and Indirect Subsidiaries and Financial Holding Company

Generally, a direct or indirect subsidiary of a financial holding company may not extend credits (excluding the amount of corporate credit card payments issued by a direct or indirect subsidiary of a financial holding company that is engaged in the banking business) to that financial holding company. In addition, a direct or indirect subsidiary of a financial holding company may not extend credits (excluding the amount of corporate credit card payments issued by a direct or indirect subsidiary of a financial holding company that is engaged in the banking business) to other direct or indirect subsidiaries of the financial holding company in excess of 10% of its capital amount on an individual basis or to those subsidiaries in excess of 20% of its capital amount on an aggregate basis. The subsidiary extending the credit must also obtain an adequate level of collateral depending on the type of such collateral from the other subsidiaries unless the credit is otherwise approved by the Financial Services Commission. The adequate level of collateral for each type of collateral is as follows:

(1) for deposits and installment savings, obligations of the Korean government or the Bank of Korea, obligations guaranteed by the Korean government or the Bank of Korea, obligations secured by securities issued or guaranteed by the Korean government or the Bank of Korea, 100% of the credit extended;

(2) for obligations of municipal governments under the Local Autonomy Act, local public enterprise under the Local Public Enterprises Act and investment institutions and other quasi-investment institutions under the Basic Act on the Management of Government-Invested Institution or for obligations guaranteed by, or secured by the securities issued or guaranteed by, the aforementioned entities pursuant to the relevant regulations, 110% of the credit extended; and

(3) for any property other than those set forth in paragraphs (1) and (2) above, 130% of the credit extended. Subject to certain exceptions, a direct or indirect subsidiary of a financial holding company is prohibited from owning the shares of any other direct or indirect subsidiaries (other than those directly controlled by that direct or indirect subsidiary) under the common control of the financial holding company.

Subject to certain exceptions, a direct or indirect subsidiary of a financial holding company is also prohibited from owning the shares of the financial holding company controlling that direct or indirect subsidiary. The transfer of certain assets classified as precautionary or below between a financial holding company and its

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direct or indirect subsidiary or between the direct and indirect subsidiaries of a financial holding company is prohibited except for:

(1) transfers to a special purpose company, or entrustment with a trust company, for an asset-backed securitization transaction under the Asset-Backed Securitization Act;

(2) transfers to a mortgage-backed securities issuance company for a mortgage securitization transaction;

(3) transfers or in-kind contributions to a corporate restructuring vehicle under the Corporate Restructuring Investment Companies Act; and

(4) transfers to a corporate restructuring company under the Industry Promotion Act.

Disclosure of Management Performance

For the purpose of protecting the depositors and investors in the subsidiaries of financial holding companies, the Financial Services Commission requires financial holding companies to disclose certain material matters including:

(1) financial condition and profit and loss of the financial holding company and its direct and indirect subsidiaries;

(2) fund-raising by the financial holding company and its direct and indirect subsidiaries and the appropriation of such funds;

(3) any sanctions levied on the financial holding company and its direct and indirect subsidiaries under the Financial Holding Company Act or any corrective measures or sanctions under the Law on Improvement of Structure of Financial Industry; and

(4) occurrence of any non-performing assets or financial incident that may have a material adverse effect, or any other event as prescribed in the applicable regulations.

Restrictions on Shareholdings in Other Companies

Generally, a financial holding company may not own (i) more than 5% of the total issued and outstanding shares of another finance-related company, (ii) any shares of its affiliates, other than its direct or indirect subsidiaries or (iii) any shares of a non-finance-related company.

Restrictions on Shareholdings by Direct and Indirect Subsidiaries

Generally, a direct subsidiary of a financial holding company may not control any other company other than, as an indirect subsidiary of the financial holding company:

- financial institutions established in foreign jurisdictions;
- certain financial institutions which are engaged in any business that the direct subsidiary may conduct without any licenses or permits;
- certain financial institutions whose business is related to the business of the direct subsidiary as described by the Enforcement Decree of the Financial Holding Company Act (for example, a bank subsidiary may control only credit information companies, credit card companies and financial investment companies with a dealing, brokerage, collective investment, investment advice, discretionary investment management and/or trust license);
- certain financial institutions whose business is related to the financial business as prescribed by the regulations of the Ministry of Economy and Finance; and
- certain companies which are not financial institutions but whose business is related to the financial business of the financial holding company as prescribed by the Enforcement Decree of the Financial Holding Company Act (for example, a finance-related research company or a finance-related information technology company).

Acquisition of such indirect subsidiaries by direct subsidiaries of a financial holding company requires prior permission from the Financial Services Commission or the submission of a report to the Financial Services Commission, depending on the types of the indirect subsidiaries and the amount of total assets of the indirect subsidiaries.

Subject to certain exceptions, an indirect subsidiary of a financial holding company may not control any other company. If an indirect subsidiary of a financial holding company had control over another company at the time it became such an indirect subsidiary, the indirect subsidiary is required to dispose of its interest in the other company within two years from such time.

Restrictions on Transactions between a Bank Holding Company and its Major Investor

A bank holding company and its direct and indirect subsidiaries may not acquire (including through their respective trust accounts) shares issued by the bank holding company s major investor in excess of 1% of the net aggregate equity capital (as defined above). In addition, if those entities intend to acquire shares issued by that major investor in any single transaction equal to or exceeding the lesser of (x) the amount equivalent to 0.1% of the net aggregate equity capital and (y) 5 billion, that entity must obtain prior unanimous board resolutions and then, immediately after the acquisition, file a report to the Financial Services Commission and publicly disclose the filing of the report.

Restrictions on Ownership of a Financial Holding Company

Under the Financial Holding Company Act, a financial institution generally may not control a financial holding company. In addition, any single shareholder and persons who have a special relationship with that shareholder may acquire beneficial ownership of up to 10% of the total issued and outstanding shares with voting rights of a bank holding company that controls nationwide banks or 15% of the total issued and outstanding shares with voting rights of a bank holding company that controls only regional banks, subject to certain exceptions. Among others, the Korean government and the Korea Deposit Insurance Corporation are not subject to this limit. Non-financial business group companies (as defined below), however, may not acquire the beneficial ownership of shares of a bank holding company controlling nationwide banks in excess of 4% of that bank holding company s outstanding voting shares unless they obtain the approval of the Financial Services Commission and agree not to exercise voting rights in respect of shares in excess of the 4% limit, in which case they may acquire beneficial ownership of up to 10%. Any other person (whether a Korean national or a foreign investor) may acquire no more than 10% of total voting shares issued and outstanding of a bank holding company controlling nationwide banks unless they obtain approval from the Financial Services Commission in each instance where the total holding will exceed 10% (or 15% in the case of a bank holding company controlling only regional banks), 25% or 33% of the total voting shares issued and outstanding of that bank holding company controlling nationwide banks.

Furthermore, in the case where a person (including Korean and foreign investors, but excluding certain persons prescribed under the Enforcement Decree of the Financial Holding Company Act) (i) acquires in excess of 4% of the total issued and outstanding voting shares of any bank holding company (other than a bank holding company controlling only regional banks), (ii) becomes the largest shareholder of such bank holding company in which such person has acquired in excess of 4% of the total issued and outstanding voting shares, (iii) changes its shareholding in such bank holding company, in which it has acquired in excess of 4% of the total issued and outstanding voting shares, by 1% or more of the total issued and outstanding voting shares of such bank holding company or (iv) is a private equity fund or an investment purpose company holding in excess of 4% of the total outstanding voting shares of a bank holding company and changes its members or shareholders, such person must file a report on such change with the Financial Services Commission (x) in case of (i) and (iii), by the last day of the month following the month in which such change occurred, or (y) in case of (ii) and (iv), within ten days after the end of the month in which such change occurred.

Non-financial business group companies as defined under the Financial Holding Company Act include:

(1) any same shareholder group where the aggregate net assets of all non-financial business companies belonging to that group equals or exceeds 25% of the aggregate net assets of all members of that group;

(2) any same shareholder group where the aggregate assets of all non-financial business companies belonging to that group equals or exceeds 2 trillion;

(3) any mutual fund where a same shareholder group identified in (1) or (2) above beneficially owns and/or exercises the voting rights of more than 4% of the total issued and outstanding voting shares of that mutual fund;

(4) any private equity fund (a) where a person falling under any of items (1) through (3) above is a limited partner holding not less than 10% of the total amount of contributions to the private equity fund, or (b) where a person falling under any of items (1) through (3) above is a general partner, or (c) where the total equity of the private equity fund acquired by each affiliate belonging to several enterprise groups subject to the limitation on mutual investment is 30% or more of the total amount of contributions to the private equity fund; or

(5) the investment purpose company concerned, where a private equity fund falling under item (4) above acquires or holds stocks in excess of 4% of the stock or equity of such company or exercises de facto control over significant managerial matters of such company through appointment or dismissal of executives or in any other manner.

Sharing of Customer Information among Financial Holding Company and its Subsidiaries

Under the Act on Use and Protection of Credit Information, any individual customer s credit information must be disclosed or otherwise used by financial institutions only to determine, establish or maintain existing commercial transactions with them and only after obtaining written consent to use that information. In addition, under the Act on Real Name Financial Transactions and Confidentiality, an individual working at a financial institution may not provide or reveal information or data concerning the contents of financial transactions to other persons unless such individual receives a request or consent in writing from the holder of a title deed, except under certain exceptions stipulated in the Act. Under the Financial Holding Company Act, a financial holding company and its direct and indirect subsidiaries, however, may share certain credit information of individual customers among themselves for internal management purposes outlined in the Enforcement Decree of the Financial Holding Company Act (such as credit risk management, internal control and customer analysis), without the customers written consent, subject to the methods and procedures for provision of such information set forth therein. A subsidiary financial investment company with a dealing and/or brokerage license of a financial holding company may provide that financial holding company and its other direct and indirect subsidiaries information relating to the aggregate amount of cash or securities that a customer of the financial investment company with a dealing and/or brokerage license has deposited, for internal management purposes outlined in the Enforcement Decree of the Financial Holding Company Act, subject to the methods and procedures for provision of such information set forth therein. Recent amendments to the Financial Holding Company Act, which became effective on November 29, 2014, limit the scope of credit information that may be shared without the customers prior consent and require certain procedures for provision of customer information as prescribed by the Financial Services Commission. Beginning in November 29, 2014, notice must be given to customers at least once a year regarding (i) the provider of customer information, (ii) the recipient of customer information, (iii) the purpose of providing the information and (iv) the categories of the information provided.

Principal Regulations Applicable to Banks

The banking system in Korea is governed by the Bank Act of 1950, as amended and the Bank of Korea Act of 1950, as amended. In addition, Korean banks are subject to the regulations and supervision of the Bank of Korea, the Monetary Policy Committee of the Bank of Korea, the Financial Services Commission and its executive body, the Financial Supervisory Service.

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 with a focus on financial stability. The Bank of Korea acts under instructions of the Monetary Policy Committee, the supreme policy-making body of the Bank of Korea.

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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 Financial Services Commission, established on April 1, 1998, regulates commercial banks pursuant to the Bank Act, including establishing guidelines on capital adequacy of commercial banks, and promulgates regulations relating to supervision of banks. Furthermore, the Financial Services Commission regulates market entry into the banking business.

The Financial Supervisory Service, established on January 2, 1999, is subject to the instructions and directives of the Financial Services Commission and carries out supervision and examination of commercial banks. In particular, the Financial Supervisory Service 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 Financial Services Commission 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 Bank Act, approval to commence a commercial banking business or a long-term financing business must be obtained from the Financial Services Commission. Commercial banking business is defined as the lending of funds acquired predominantly from the acceptance of demand deposits for a period not exceeding one year or subject to the limitation established by the Financial Services Commission, 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 time deposits with maturities of at least one year, or the issuance of debentures or other bonds. A bank wishing to enter into any business other than commercial banking and long-term financing businesses, such as the trust business, must obtain approval from the Financial Services Commission. Approval to merge with any other banking institution, to liquidate, to spin off, to close a banking business or to transfer all or a part of a business must also be obtained from the Financial Services Commission.

If the Financial Services Commission 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 Financial Services Commission may order:

- admonitions or warnings with respect to its officers;
- capital increases or reductions;
- assignments of contractual rights and obligations relating to financial transactions;
- a suspension of performance by its officers of their duties and the appointment of receivers;
- disposals of property holdings or closures of subsidiaries or branch offices or downsizing;

- stock cancellations or consolidations;
- mergers with other financial institutions;
- acquisition of such bank by a third party; or
- suspensions of a part or all of its business operations.

Capital Adequacy

The Bank Act requires nationwide banks, such as us, to maintain a minimum paid-in capital of 100 billion and regional banks to maintain a minimum paid-in capital of 25 billion. All banks, including foreign bank branches in Korea, are also required to maintain a prescribed solvency position. A bank must also set aside in its legal reserve an amount equal to at least 10% of the net income after tax each time it pays dividends on net profits earned until its legal reserve reaches at least the aggregate amount of its paid-in capital.

Under the Detailed Regulation on the Supervision of the Banking Business, the capital of a bank is divided into two categories, Tier I and Tier II capital. Tier I capital (core capital) consists of (i) Tier I common equity capital, including paid-in capital, capital surplus and retained earnings related to common equity and accumulated other comprehensive gains and losses, and (ii) additional Tier I capital, including paid-in capital and capital surplus related to hybrid Tier I capital instruments that, among other things, qualify as contingent capital and are subordinated to subordinated debt. Tier II capital (supplementary capital) consists of, among other things, capital and capital surplus from the issuance of Tier II capital instruments, allowances for loan losses on loans classified as normal or precautionary, subordinated debt and other capital securities which meet the standards prescribed by the governor of the Financial Supervisory Service under Article 26(2) of the Regulation on the Supervision of the Banking Business.

All banks must meet minimum ratios of Tier I and Tier II capital (less any capital deductions) to risk-weighted assets, determined in accordance with Financial Services Commission requirements that have been formulated based on Bank for International Settlements standards. These requirements were adopted and became effective in 1996, and were amended effective January 1, 2008 upon the implementation by the Financial Supervisory Service of Basel II. Under such requirements, all domestic banks and foreign bank branches must meet a minimum ratio of Tier I and Tier II capital (less any capital deductions) to risk-weighted assets of 8.0%. Commencing in July 2013, the Financial Services Commission promulgated a series of amended regulations implementing Basel III in Korea, pursuant to which Korean banks and bank holding companies were required to maintain a minimum ratio of Tier I common equity capital to risk-weighted assets of 3.5% and Tier I capital to risk-weighted assets of 4.5% from December 1, 2013, which minimum ratios were increased to 4.0% and 5.5%, respectively, from January 1, 2014 and increased further to 4.5% and 6.0%, respectively, from January 1, 2015. Such requirements are in addition to the pre-existing requirement for a minimum ratio of Tier I and Tier II capital (less any capital deductions) to risk-weighted assets of 8.0%, which remains unchanged. The amended regulations also require an additional capital conservation buffer of 1.875% in 2018 and 2.5% in 2019, as well as a potential counter-cyclical capital buffer of up to 2.5%, which is determined on a quarterly basis by the Financial Services Commission. Furthermore, Woori Bank was designated as one of six domestic systemically important banks for 2018 by the Financial Services Commission and was subject to an additional capital requirement of 0.75% in 2018. In June 2018, Woori Bank was again designated as a domestic systemically important bank for 2019, which subjects Woori Bank to an additional capital requirement of 1.0% in 2019.

Under the Detailed Regulation on the Supervision of the Banking Business, the following risk-weight ratios must be applied by Korean banks in respect of home mortgage loans:

(1) for those banks which adopted a standardized approach for calculating credit risk capital requirements, a risk-weight ratio of 35% (only in the case where the loan is fully secured by a first ranking mortgage) and, with respect to high-risk home mortgage loans, 50% or 70%; and

(2) for those banks which adopted an internal ratings-based approach for calculating credit risk capital requirements, a risk-weight ratio calculated with reference to the probability of default, loss given default and exposure at default, each as defined under the Detailed Regulation on the Supervision of the Banking Business.

Liquidity

All banks are required to ensure adequate liquidity by matching the maturities of their assets and liabilities in accordance with the Regulation on the Supervision of the Banking Business. Banks may not invest an amount exceeding 100% of their Tier I and Tier II capital (less any capital deductions) in equity securities and certain other securities with a redemption period of over three years. This stipulation does not apply to Korean government bonds, Monetary Stabilization Bonds issued by the Bank of Korea or debentures and stocks referred to in items 1 and 2, respectively, of paragraph (6) of Article 11 of the Act on the Improvement of the Structure of the Financial Industry. The Financial Services Commission uses the liquidity coverage ratio as the principal liquidity risk management measure, and currently requires each Korean bank to:

- maintain a liquidity coverage ratio (defined as the ratio of highly liquid assets to total net cash outflows over a 30-day period) of not less than 100% from January 1, 2019 (compared to not less than 95% from January 1, 2018 to December 31, 2018);

maintain a foreign currency liquidity coverage ratio of not less than 80% from January 1, 2019 (compared to not less than 70% from January 1, 2018 to December 31, 2018); provided, however, that the foreign currency liquidity ratio (defined as the ratio of foreign currency assets due within three months to foreign currency liabilities due within three months) would apply if the amount of foreign currency assets and the ratio of foreign currency liabilities to total liabilities are less than the respective amount and ratio, or in certain other cases, specified under the Bank Act and the regulations thereunder; and

submit monthly reports with respect to the maintenance of these ratios.

The Monetary Policy Committee of the Bank of Korea is empowered to fix and alter minimum reserve requirements that banks must maintain against their deposit liabilities. The current minimum reserve ratios are:

7% of average balances for Won currency demand deposits outstanding;

0% of average balances for Won currency 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 (with respect to employee-related deposits, only if such deposits were made before February 28, 2013); and

2% of average balances for Won currency time deposits, installment savings deposits, mutual installments, housing installments and certificates of deposit outstanding.

For foreign currency deposit liabilities, a 2% minimum reserve ratio is applied to time deposits with a maturity of one month or longer, certificates of deposit with a maturity of 30 days or longer and savings deposits with a maturity of six months or longer and a 7% minimum reserve ratio is applied to other deposits. A 1% minimum reserve ratio applies to deposits in offshore accounts, immigrant accounts and resident accounts opened by foreign exchange banks as well as foreign currency certificates of deposit held by account holders of such offshore accounts, immigrant accounts and resident accounts opened by foreign exchange banks.

Furthermore, under the Regulation on the Supervision of the Banking Business, we are required to maintain a minimum mid- to long-term foreign exchange funding ratio of 100%. Mid-to long term foreign exchange funding ratio refers to the ratio of (1) the total outstanding amount of foreign exchange borrowing with a maturity of more than one year to (2) the total outstanding amount of foreign exchange lending with a maturity of one year or more.

Amendments Relating to Net Stable Funding Ratio and Leverage Ratio Requirements

The Regulation on Supervision of the Banking Business imposes certain liquidity- and leverage-related ratio requirements on banks in Korea, in accordance with Basel III. Pursuant to such regulations, each Korean bank is required to:

maintain a net stable funding ratio (defined as the ratio of the available amount of stable funding to the required amount of stable funding) of not less than 100%, where (i) the available amount of stable funding generally refers to the portion of liabilities and capital expected to be reliable over a one-year time horizon and (ii) the required amount of stable funding generally refers to the portion of assets requiring stable funding over a time horizon of one year or longer, each as calculated in accordance with the Detailed Regulation on Supervision of the Banking Business;

maintain a leverage ratio (defined as the ratio of core capital to total exposures) of not less than 3%, where (i) core capital includes paid-in capital, capital surplus, retained earnings and hybrid Tier I capital instruments and (ii) total exposures include on-balance sheet exposures and off-balance sheet exposures, each as calculated in accordance with the Detailed Regulation on Supervision of the Banking Business; and

submit monthly reports with respect to the maintenance of these ratios.

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Financial Exposure to Any Individual Customer or Major Shareholder

Under the Bank Act, subject to certain exceptions, the sum of large exposures by a bank in other words, the total sum of its credits to single individuals, juridical persons or business groups that exceed 10% of the sum of Tier I and Tier II capital (less any capital deductions) generally must not exceed five times the sum of Tier I and Tier II capital (less any capital deductions). In addition, subject to certain exceptions, banks generally may not extend credit (including loans, guarantees, purchases of securities (only in the nature of a credit) and any other transactions that 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 a single individual or juridical person, or grant credit in excess of 25% of the sum of Tier I and Tier II capital (less any capital deductions) to a single group of companies as defined in the Monopoly Regulations and Fair Trade Act.

The Bank Act also provides for certain restrictions on extending credits to a major shareholder. A major shareholder is defined as:

- a shareholder holding (together with persons who have a special relationship with that shareholder) in excess of 10%; (or 15% in the case of regional banks) 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) in excess of 4% in the aggregate of the bank s (excluding regional banks) total issued and outstanding voting shares of a bank (excluding shares subject to the shareholding restrictions on non-financial business group companies as described below), where such shareholder is the largest shareholder or has actual control over the major business affairs of the bank through, for example, appointment and dismissal of the officers pursuant to the Enforcement Decree of the Bank Act. Non-financial business group companies primarily consist of: (i) any single shareholding group whose non-financial company assets comprise no less than 25% of its aggregate net assets; (ii) any single shareholding group whose non-financial company assets comprise no less than 2 trillion in aggregate; or (iii) any investment company under the Financial Investment Services and Capital Markets Act of which any single shareholding group identified in (i) or (ii) above, owns more than 4% of the total issued and outstanding shares. See Supervision and Regulation Principal Regulations Applicable to Banks Restrictions on Bank Ownership.

Under these restrictions, banks may not extend credits to a major shareholder (together with persons who have a special relationship with that shareholder) in an amount greater than the lesser of (x) 25% of the sum of the bank s Tier I and Tier II capital (less any capital deductions) and (y) the relevant major shareholders shareholding ratio multiplied by the sum of the bank s Tier I and Tier II capital (less any capital deductions). In addition, the total sum of credits granted to all major shareholders must not exceed 25% of the bank s Tier I and Tier II capital (less any capital deductions).

Interest Rates

Korean banks generally depend on deposits as their primary funding source. Under the Act on Registration of Credit Business and Protection of Finance Users and the regulations thereunder, interest rates on loans made by registered banks in Korea to individuals or small corporations, as defined under the Framework Act on Small and Medium Enterprises, may not exceed 24% per annum. Historically, interest rates on deposits and lending were regulated by the

Monetary Policy Committee. There are no controls on deposit interest rates in Korea, except for the prohibition on interest payments on current account deposits.

Lending to Small- and Medium-Sized Enterprises

In order to obtain funding from the Bank of Korea at concessionary rates for their small- and medium-sized enterprise loans, banks are required to allocate a certain minimum percentage of any quarterly increase in their Won currency lending to small- and medium-sized enterprises. Currently, this minimum percentage is 45% in the case of nationwide banks and 60% in the case of regional banks. If a bank does not comply with this requirement, the Bank of Korea may:

- require the bank to prepay all or a portion of funds provided to that bank in support of loans to small- and medium-sized enterprises; or

- lower the bank s credit limit.

Disclosure of Management Performance

For the purpose of protecting depositors and investors in commercial banks, the Financial Services Commission requires commercial banks to publicly disclose certain material matters, including:

- financial condition and profit and loss of the bank and its subsidiaries;

- fund raising by the bank and the appropriation of such funds;

- any sanctions levied on the bank under the Bank Act or any corrective measures or sanctions under the Law on Improvement of Structure of Financial Industry; and

- except as may otherwise have been disclosed by a bank or its financial holding company listed on the KRX KOSPI Market in accordance with the Financial Investment Services and Capital Markets Act, occurrence of any of the following events or any other event as prescribed by the applicable regulations:

  (i) 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 that borrower is calculated pursuant to the criteria under the Detailed Regulation on the Supervision of the Banking Business), unless the loan exposure to that group is not more than 4 billion; and

  (ii) 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, unless the loss is not more than 1 billion.

Restrictions on Lending

Pursuant to the Bank Act, commercial banks may not provide:

loans directly or indirectly secured by a pledge of a bank s own shares;

loans directly or indirectly to enable a natural or juridical person to buy the bank s own shares;

loans to any of the bank s officers or employees, other than *de minimis* loans of up to (i) 20 million in the case of a general loan, (ii) 50 million in the case of a general loan plus a housing loan or (iii) 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; or

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.

Regulations Relating to Retail Household Loans

The Financial Services Commission has implemented a number of changes in recent years to the regulations relating to retail household lending by banks. Under the currently applicable regulations:

as to loans secured by collateral of housing (including apartments) located nationwide, the loan-to-value ratio (the aggregate principal amount of loans secured by such collateral over the appraised value of the collateral) should not exceed 70%;

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as to loans secured by collateral of housing (including apartments) located in areas of excessive investment or housing (including apartments) located in areas of high speculation, in each case as designated by the government, the loan-to-value ratio should not exceed 40%, except that the loan-to-value ratio for first-home buyers, low-income households with an annual income of less than 70 million (for first home buyers, 80 million) or buyers of low-price housing valued at less than 600 million should not exceed 50%;

as to any new loans secured by collateral of housing to be extended to a household, any member of which has already received one or more loans secured by the collateral of housing, the maximum loan-to-value ratio is 10% lower than the applicable loan-to-value ratio described above;

as to loans secured by collateral of housing (including apartments) located in areas of excessive investment or housing (including apartments) located in areas of high speculation, in each case, as designated by the government, 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 (y) the interest on other debts of the borrower over (ii) the borrower s annual income) should not exceed 40%, except that the debt-to-income ratio for first-home buyers, low-income households with an annual income of less than 70 million (for first home buyers, 80 million) or buyers of low-price housing valued at less than 600 million should not exceed 50%;

as to any new loans secured by collateral of housing to be extended to a household, any member of 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 ratio described above;

as to apartments located in areas of high speculation 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 areas of high speculation 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.

Restrictions on Investments in Property

A bank may not invest in securities set forth below in excess of 100% of the sum of the bank s Tier I and Tier II capital (less any capital deductions):

debt securities (within the meaning of paragraph (3) of Article 4 of the Financial Investment Services and Capital Markets Act) the maturity of which exceeds three years, but excluding government bonds, monetary stabilization bonds issued by the Bank of Korea and bonds within the meaning of item 2, paragraph (6) of Article 11 of the Act on the Improvement of the Structure of the Financial Industry;

equity securities, but excluding securities within the meaning of item 1, paragraph (6) of Article 11 of the Act on the Improvement of the Structure of the Financial Industry;

derivatives linked securities (within the meaning of paragraph (7) of Article 4 of the Financial Investment Services and Capital Markets Act) the maturity of which exceeds three years; and

beneficiary certificates, investment contracts and depositary receipts (within the meaning of paragraph (2) of Article 4 of the Financial Investment Services and Capital Markets Act) the maturity of which exceeds three years.

A bank may possess real estate property only to the extent necessary for the conduct of its business. The aggregate value of such property may not exceed 60% of the sum of the bank s Tier I and Tier II capital (less any capital deductions). Any property that a bank acquires by exercising its rights as a secured party, or which a bank is prohibited from acquiring under the Bank Act, must be disposed of within three years, unless specified otherwise by the regulations thereunder.

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Restrictions on Shareholdings in Other Companies

Under the Bank Act, a bank may not own more than 15% of shares outstanding with voting rights of another corporation, except where, among other reasons:

- that corporation engages in a category of financial businesses set forth by the Financial Services Commission; or

- the acquisition of shares by the bank is necessary for the corporate restructuring of such corporation and is approved by the Financial Services Commission.

In the above exceptional cases, the total investment in corporations in which the bank owns more than 15% of the outstanding shares with voting rights may not exceed (i) 20% of the sum of Tier I and Tier II capital (less any capital deductions) or (ii) 30% of the sum of Tier I and Tier II capital (less any capital deductions) where the acquisition satisfies the requirements determined by the Financial Services Commission.

The Bank 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 Bank Act, a single shareholder and persons who have a special relationship with that shareholder generally may acquire beneficial ownership of no more than 10% of a nationwide bank s total issued and outstanding shares with voting rights and no more than 15% of a regional bank s total issued and outstanding shares with voting rights. The Korean government, the KDIC and bank holding companies qualifying under the Financial Holding Company Act are not subject to this limit. However, pursuant to an amendment to the Bank Act which became effective on February 14, 2014, non-financial business group companies may not acquire beneficial ownership of shares of a nationwide bank in excess of 4% of that bank s outstanding voting shares (or 15% in the case of a regional bank), unless they satisfy certain requirements set forth by the Enforcement Decree of the Bank Act, obtain the approval of the Financial Services Commission and agree not to exercise voting rights in respect of shares in excess of the 4% limit (or the 15% limit in the case of a regional bank), in which case they may acquire beneficial ownership of up to 10% of a nationwide bank s outstanding voting shares. Such amendment grants an exception for non-financial business group companies which, at the time of the enactment of the amended provisions, held more than 4% of the shares of a bank.

Non-financial business group companies as defined under the Bank Act include:

(1) any same shareholder group with aggregate net assets of all non-financial business companies belonging to such group of not less than 25% of the aggregate net assets of all members of such group;

(2) any same shareholder group with aggregate assets of all non-financial business companies belonging to such group of not less than 2 trillion;

(3) any mutual fund in which a same shareholder group identified in item (1) or (2) above beneficially owns and/or exercises the voting rights of more than 4% of the total issued and outstanding voting shares of such mutual fund;

(4) any private equity fund with (a) a person falling under any of items (1) through (3) above as a limited partner holding not less than 10% of the total amount of contributions to the private equity fund, or (b) a person falling under any of items (1) through (3) above as a general partner, or (c) the total equity of the private equity fund acquired by each affiliate belonging to several enterprise groups subject to the limitation on mutual investment being 30% or more of the total amount of contributions to the private equity fund; or

(5) any investment purpose company in which a private equity fund falling under item (4) above acquires or holds shares in excess of 4% of the shares or equity of such company or exercises de facto control over significant managerial matters of such company through appointment or dismissal of executives or in any other manner.

In addition, if a foreign investor, as defined in the Foreign Investment Promotion Act, owns in excess of 4% of a nationwide bank s outstanding voting shares, non-financial business group companies may acquire beneficial ownership of up to 10% of that bank s outstanding voting shares (or 15% in the case of a regional bank), and in excess of 10% (or 15% in the case of a regional bank), 25% or 33% of that bank s outstanding voting shares with the approval of the Financial Services Commission in each instance, up to the number of shares owned by the foreign investor. Any other person (whether a Korean national or a foreign investor), with the exception of non-financial business group companies described above, may acquire no more than 10% of a nationwide bank s total voting shares issued and outstanding, unless they obtain approval from the Financial Services Commission in each instance where the total holding will exceed 10% (or 15% in the case of regional banks), 25% or 33% of the bank s total voting shares issued and outstanding provided that, in addition to the foregoing threshold shareholding ratios, the Financial Services Commission may, at its discretion, designate a separate and additional threshold shareholding ratio.

Deposit Insurance System

The Depositor Protection Act provides insurance for certain deposits of banks in Korea through a deposit insurance system. Under the Depositor Protection Act, all banks governed by the Bank Act are required to pay an insurance premium to the KDIC on a quarterly basis, and the rate is determined under the Enforcement Decree to the Depositor Protection Act. If the KDIC makes a payment on an insured amount, it will acquire the depositors claims with respect to that payment amount. The KDIC insures a maximum of 50 million per individual for deposits and interest in a single financial institution, regardless of when the deposits were made and the size of the deposits. Certain banks governed by the Bank Act, including us, are also required by the Deposit Insurance Act to pay a special contribution of 0.025% of average deposits for each quarter as repayment of the governmental funding provided to such banks in the wake of the financial crisis in Korea in the late 1990s. The Depositor Protection Act requires such special contribution to be paid until 2027.

Restrictions on Foreign Exchange Position

Under the Korean Foreign Exchange Transaction Law, each of a bank s net overpurchased and oversold positions may not exceed 50% of its shareholder s equity as of the end of the prior month.

Laws and Regulations Governing Other Business Activities

A bank must register with the Ministry of Economy and Finance to enter the foreign exchange business, which is governed by the Foreign Exchange Transaction Act of Korea. A bank must obtain the permission of the Financial Services Commission to enter the securities business, which is governed by regulations under the Financial Investment Services and Capital Markets Act. Under these laws, a bank may engage in the foreign exchange business, securities repurchase business, governmental/public bond underwriting business and governmental bond dealing business.

Regulations on Trust Business

A bank must obtain approval from the Financial Services Commission to engage in trust businesses. The Trust Act and the Financial Investment Services and Capital Markets Act govern the trust activities of banks, and they are subject to various legal and accounting procedures and requirements, including the following:

- under the Trust Act, assets accepted in trust by a bank in Korea must be segregated from other assets in the accounts of that bank; and

- depositors and other general creditors cannot obtain or assert claims against the assets comprising the trust accounts in the event the bank is liquidated or wound-up.

The bank must make a special reserve of 25% or more of fees from each unspecified money trust account for which a bank guarantees the principal amount and a fixed rate of interest until the total reserve for that account equals 5% of the trust amount. Since January 1999, the Korean government has prohibited Korean banks from offering new guaranteed fixed rate trust account products whose principal and interest are guaranteed.

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Under the Financial Investment Services and Capital Markets Act, which became effective in February 2009, a bank with a trust business license (such as us) is permitted to offer both specified money trust account products and unspecified money trust account products. Previously, banks were not permitted to offer unspecified money trust account products pursuant to the Indirect Investment Asset Management Act, which is no longer in effect following the effectiveness of the Financial Investment Services and Capital Markets Act.

Regulations on Credit Card Business

General

In order to enter the credit card business, a company must obtain a license from the Financial Services Commission. Credit card businesses are governed by the Specialized Credit Financial Business Act, which sets forth specific requirements with respect to the credit card business as well as generally prohibiting unsound business practices relating to the credit card business which may infringe on the rights of credit card holders or negatively affect the soundness of the credit card industry. Credit card companies, including our wholly-owned subsidiary, Woori Card, are regulated by the Financial Services Commission and the Financial Supervisory Service.

Disclosure and Reports

Under the Specialized Credit Financial Business Act and the regulations thereunder, a credit card company is required to disclose on a periodic and on-going basis certain material matters and events. In addition, a credit card company must submit its business reports with respect to its results of operations to the Governor of the Financial Supervisory Service within one month from the end of each quarter for quarterly reports and within 10 days from the end of each month for monthly reports.

Restrictions on Funding

Under the Specialized Credit Financial Business Act and the regulations thereunder, a credit card company must ensure that its total assets do not exceed an amount equal to six times its equity capital and that the ratio of its adjusted equity capital to its adjusted total assets is not less than 8%. However, if a credit card company is unable to comply with such limit upon the occurrence of unavoidable events, such as drastic changes in the domestic and global financial markets, such limit may be adjusted through a resolution of the Financial Services Commission.

Risk of Loss Due to Lost, Stolen, Forged or Altered Credit Cards

Under the Specialized Credit Financial Business Act, a credit card company is liable for any loss arising from the unauthorized use of credit cards or debit cards after it has received notice from the holder of the loss or theft of the card. A credit card company is also responsible for any losses resulting from the use of forged or altered credit cards, debit cards and pre-paid cards. A credit card company may, however, transfer all or part of this latter risk of loss to holders of credit card in the event of willful misconduct or gross negligence by holders of credit card if the terms and conditions of the agreement entered between the credit card company and members of such cards specifically provide for that transfer.

For these purposes, disclosure of a customer s password that is made intentionally or through gross negligence, or the transfer of or giving as collateral of the credit card or debit card, is considered willful misconduct or gross negligence. However, a disclosure of a cardholder s password that is made under irresistible force or threat to cardholder or his/her relatives life or health will not be deemed as willful misconduct or negligence of the cardholder.

Each credit card company must institute appropriate measures to fulfill these obligations, such as establishing provisions, purchasing insurance or joining a cooperative association.

Pursuant to the Enforcement Decree to the Specialized Credit Financial Business Act, a credit card company will be liable for any losses arising from loss or theft of a credit card (which was not from the holder s willful misconduct or negligence) during the period beginning 60 days before the notice by the holder to the credit card company.

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Pursuant to the Specialized Credit Financial Business Act, the Financial Services Commission may either restrict the limit or take other necessary measures against the credit card company with respect to such matters as the maximum limits on the amount per credit card, details of credit card terms and conditions, management of credit card merchants and collection of claims, including the following:

- maximum limits for cash advances on credit cards;
- use restrictions on debit cards with respect to per day or per transaction usage;
- aggregate issuance limits and maximum limits on the amount per card on pre-paid cards; and
- other matters prescribed by the Enforcement Decree to the Specialized Credit Financial Business Act.

Lending Ratio in Ancillary Business

Pursuant to the Enforcement Decree to the Specialized Credit Financial Business Act, a credit card company must maintain an aggregate quarterly average outstanding lending balance to credit cardholders (including cash advances and credit card loans, but excluding restructured loans) no greater than the sum of (i) its aggregate quarterly average outstanding credit card balance arising from the purchase of goods and services and (ii) the aggregate quarterly debit card transaction volume.

Issuance of New Cards and Solicitation of New Cardholders

The Enforcement Decree to the Specialized Credit Financial Business Act establishes the conditions under which a credit card company may issue new cards and solicit new members. New credit cards may be issued only to the following persons:

- persons who are at least 19 years old when they apply for a credit card;
- persons whose capability to pay bills as they come due has been verified using standards established by the credit card company; and
- in the case of minors who are 18 years old, persons who submit documents evidencing employment as of the date of the credit card application, such as an employment certificate, or persons for whom the issuance of a credit card is necessitated by governmental policies, such as financial aid.

In addition, a credit card company may not solicit credit card members by:

providing or promising to provide economic benefits in excess of 10% of the annual credit card fee (in the case of credit cards with annual fees that are less than the average of the annual fees charged by the major credit cards in Korea, the annual fee will be deemed to be equal to such average annual fee) in connection with issuing a credit card; provided, however, that providing or promising to provide economic benefits not exceeding the amount of the annual credit card fee to an applicant that becomes a credit card member through an online platform is permissible;

soliciting applicants on roads, public places or along corridors used by the general public;

soliciting applicants through visits, except those visits made upon prior consent and visits to a business area;

soliciting applicants through the Internet without verifying whether the applicant is who he or she purports to be, by means of a certified digital signature under the Digital Signature Act; and

soliciting applicants through pyramid sales methods.

Compliance Rules on Collection of Receivable Claims

Pursuant to Supervisory Regulation on the Specialized Credit Financial Business, a credit card company may not:

exert violence or threaten violence;

inform a related party (a guarantor of the debtor, blood relative or fiancée of the debtor, a person living in the same household as the debtor or a person working in the same workplace as the debtor) of the debtors obligations without just cause;

provide false information relating to the debtor s obligation to the debtor or his or her related parties;

threaten to sue or sue the debtor for fraud despite lack of affirmative evidence to establish that the debtor has submitted forged or false documentation with respect to his/her ability to make payment;

visit or telephone the debtor during late evening hours (between the hours of 9:00 p.m. and 8:00 a.m.); and

utilize other uncustomary methods to collect the receivables that interfere with the privacy or the peace in the workplace of the debtor or his or her related parties.

Regulations on Class Actions Regarding Securities

The Law on Class Actions Regarding Securities was enacted as of January 20, 2004 and last amended on May 28, 2013. The Law on Class Actions Regarding Securities governs class actions suits instituted by one or more representative plaintiff(s) on behalf of 50 or more persons who claim to have been damaged in a capital markets transaction involving securities issued by a listed company in Korea.

Applicable causes of action with respect to such suits include:

claims for damages caused by misleading information contained in a securities statement;

claims for damages caused by the filing of a misleading business report, semi-annual report, or quarterly report;

claims for damages caused by insider trading or market manipulation; and

claims instituted against auditors for damages caused by accounting irregularities.

Any such class action may be instituted upon approval from the presiding court and the outcome of such class action will have a binding effect on all potential plaintiffs who have not joined the action, with the exception of those who have filed an opt out notice with such court.

Regulations on Financial Investment Business

General

The Financial Investment Services and Capital Markets Act, which became effective in February 2009, regulates and governs the financial investment business in Korea. The entities that regulate and supervise financial investment companies are the Financial Services Commission, the Financial Supervisory Service and the Securities and Futures Commission.

Under the Financial Investment Services and Capital Markets Act, a company must obtain a license from the Financial Services Commission to commence a financial investment business such as a brokerage business, a dealing business or an underwriting business, or register with the Financial Services Commission to commence a financial investment business such as an investment advisory business or a discretionary investment management business. A bank is permitted to engage in certain types of financial investment business as specified under the Enforcement Decree of the Bank Act. Prior to commencing a financial investment business, a bank must file a report with the Financial Services Commission and apply for a license pursuant to the Financial Investment Services and Capital Markets Act.

Consolidation of Capital Markets-Related Laws

Prior to the effectiveness of the Financial Investment Services and Capital Markets Act, there were separate laws regulating various types of financial institutions depending on the type of financial institution (e.g., securities companies, futures companies, trust business companies and asset management companies) and subjecting financial institutions to different licensing and ongoing regulatory requirements (e.g., the Korean Securities Exchange Act, the Futures Business Act and the Indirect Investment Asset Management Business Act). By applying one uniform set of rules to the same financial business having the same economic function, the Financial Investment Services and Capital Markets Act attempts to improve and address issues caused by the previous regulatory system under which the same economic function relating to capital markets-related businesses was governed by multiple regulations. To this end, the Financial Investment Services and Capital Markets Act categorizes capital markets-related businesses into six different functions:

- dealing, trading and underwriting of financial investment products (as defined below);
- brokerage of financial investment products;
- establishment of collective investment schemes and the management thereof;
- investment advice;
- discretionary investment management; and
- trusts (together with the five businesses set forth above, the Financial Investment Businesses).

Accordingly, all financial businesses relating to financial investment products have been reclassified as one or more of the Financial Investment Businesses described above, and financial institutions are subject to the regulations applicable to their relevant Financial Investment Businesses, regardless of the type of the financial institution. For example, under the Financial Investment Services and Capital Markets Act, derivative businesses conducted by former securities companies and future companies will be subject to the same regulations.

Banking and insurance businesses are not subject to the Financial Investment Services and Capital Markets Act and will continue to be regulated under separate laws. However, they may become subject to the Financial Investment Services and Capital Markets Act if their activities involve any financial investment businesses requiring a license pursuant to the Financial Investment Services and Capital Markets Act.

Comprehensive Definition of Financial Investment Products

In an effort to encompass the various types of securities and derivative products available in the capital markets, the Financial Investment Services and Capital Markets Act sets forth a comprehensive term financial investment products, defined to mean all financial products with a risk of loss in the invested amount (in contrast to deposits, which are financial products for which the invested amount is protected or preserved). Financial investment products are classified into two major categories: (i) securities (financial investment products in which the risk of loss is limited to the invested amount) and (ii) derivatives (financial investment products in which the risk of loss may exceed the invested amount). As a result of the general and broad definition of financial investment products, a variety of financial products may be defined as a financial investment product, which would enable Financial Investment

Companies (defined below) to handle a broader range of financial products. Under the Financial Investment Services and Capital Markets Act, entities formerly licensed as securities companies, asset management companies, futures companies and other entities engaging in any Financial Investment Business are classified as Financial Investment Companies.

New License System and the Conversion of Existing Licenses

Under the Financial Investment Services and Capital Markets Act, Financial Investment Companies are able to choose the type of Financial Investment Business in which to engage (through a check the box method set forth in the relevant license application), by specifying the desired (i) Financial Investment Business, (ii) financial investment product and (iii) target customers to which financial investment products may be sold or distributed (that is, general investors or professional investors). Licenses will be issued under the specific business sub-categories described in the foregoing sentence. For example, it would be possible for a Financial Investment Company to obtain a license to engage in the Financial Investment Business of (i) dealing (ii) over the counter derivatives products or (iii) only with sophisticated investors.

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Financial institutions that engage in business activities constituting a Financial Investment Business are required to take certain steps, such as renewal of their license or registration, in order to continue engaging in such business activities. Financial institutions that are not licensed Financial Investment Companies are not permitted to engage in any Financial Investment Business, subject to the following exceptions: (i) banks and insurance companies are permitted to engage in certain categories of Financial Investment Businesses for a period not exceeding six months commencing on the effective date of the Financial Investment Services and Capital Markets Act; and (ii) other financial institutions that engaged in any Financial Investment Business prior to the effective date of the Financial Investment Services and Capital Markets Act (whether in the form of a concurrent business or an incidental business) are permitted to continue such Financial Investment Business for a period not exceeding six months commencing on the effective date of the Financial Investment Services and Capital Markets Act.

Expanded Business Scope of Financial Investment Companies

Under the previous regulatory regime in Korea, it was difficult for a financial institution to explore a new line of business or expand upon its existing line of business. For example, previously a financial institution licensed as a securities company generally was not permitted to engage in the asset management business. In contrast, under the Financial Investment Services and Capital Markets Act, pursuant to the integration of its current businesses involving financial investment products into a single Financial Investment Business, a licensed Financial Investment Company is permitted to engage in all types of Financial Investment Businesses, subject to satisfying relevant regulations (for example, maintaining an adequate Chinese Wall, to the extent required). As to incidental businesses (that is, a financial related business which is not a Financial Investment Business), the Financial Investment Services and Capital Markets Act generally allows a Financial Investment Company to freely engage in such incidental businesses by shifting away from the previous positive-list system towards a more comprehensive system. In addition, a Financial Investment Company is permitted to (i) outsource marketing activities by contracting introducing brokers that are individuals but not employees of the Financial Investment Company, (ii) engage in foreign exchange businesses related to their Financial Investment Business and (iii) participate in the settlement network, pursuant to an agreement among the settlement network participants.

Improvement in Investor Protection Mechanism

While the Financial Investment Services and Capital Markets Act widens the scope of financial businesses in which financial institutions are permitted to engage, a more rigorous investor-protection mechanism is also imposed upon Financial Investment Companies dealing in financial investment products. The Financial Investment Services and Capital Markets Act distinguishes general investors from sophisticated investors and provides new or enhanced protections to general investors. For instance, the Financial Investment Services and Capital Markets Act expressly provides for a strict know-your-customer rule for general investors and imposes an obligation that Financial Investment Companies should market financial investment products suitable to each general investor, using written explanatory materials. Under the Financial Investment Services and Capital Markets Act, a Financial Investment Company could be liable if a general investor proves (i) damage or losses relating to such general investor s investment in financial investment products solicited by such Financial Investment Company and (ii) the absence of the requisite written explanatory materials, without having to prove fault or causation. With respect to any conflicts of interest between Financial Investment Companies and investors, the Financial Investment Services and Capital Markets Act expressly requires (i) disclosure of any conflict of interest to investors and (ii) mitigation of conflicts of interest to a comfortable level or abstention from the relevant transaction.

Other Changes to Securities / Fund Regulations

The Financial Investment Services and Capital Markets Act changed various securities regulations including those relating to public disclosure, insider trading and proxy contests, which were previously governed by the Korean Securities Exchange Act. For example, the 5% and 10% reporting obligations under the Korean

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Securities Exchange Act have become more stringent. The Indirect Investment and Asset Management Business Act strictly limited the kind of vehicles that could be utilized under a collective investment scheme, restricting the range of potential vehicles to trusts and corporations, and the type of funds that can be used for investments. However, under the Financial Investment Services and Capital Markets Act, these restrictions have been significantly liberalized, permitting all vehicles that may be created under Korean law, such as limited liability companies or partnerships, to be used for the purpose of collective investments and allowing investment funds to be more flexible as to their investments.

Act on the Corporate Governance of Financial Companies

The Act on the Corporate Governance of Financial Companies, which became effective on August 1, 2016, was enacted to address the need for strengthened regulations on corporate governance of financial institutions and to serve as a uniform set of regulations on corporate governance matters applicable to financial institutions across a variety of industry sectors. It contains several key measures, including (i) eligibility requirements for officers of financial institutions and standards for determining whether officers of financial institutions may hold concurrent positions in other companies, (ii) standards for composition and operation of the board of directors of financial institutions, (iii) standards for establishment, composition and operation of various committees of the board of directors of financial institutions, (iv) regulations on internal control and risk management, (v) requirements and procedures for the approval of a change of major shareholders and (vi) special regulations to protect the rights of minority shareholders of financial institutions.

Item 4.C. *Organizational Structure*

The following chart provides an overview of our structure, including our significant subsidiaries and our ownership of such subsidiaries as of the date of this annual report:

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The following table provides summary information for our subsidiaries (other than structured companies) that are consolidated in our consolidated financial statements as of and for the year ended December 31, 2018:

Subsidiary	Percentage of Ownership	Total Assets	Shareholders Equity	Operating Revenue	Net Income
			(in millions of Won)		
Woori Card Co., Ltd.	100.0%	9,987,057	1,681,964	1,371,301	114,767
Woori Investment Bank Co., Ltd.	59.8%	2,682,660	315,242	205,446	25,552
Woori FIS Co., Ltd.	100.0%	96,260	32,849	271,651	2,840
Woori Finance Research Institute Co., Ltd.	100.0%	3,891	3,332	4,708	7
Woori Credit Information Co., Ltd.	100.0%	34,921	28,535	36,883	1,657
Woori Fund Service Co., Ltd.	100.0%	14,448	13,008	10,052	1,597
Woori Private Equity Asset Management Co., Ltd.	100.0%	38,820	37,381	1,713	(2,794)
Korea BTL Infrastructure Fund	99.9%	777,437	777,138	29,760	26,057
Woori America Bank	100.0%	2,182,454	304,337	90,975	20,510
Woori Bank (China) Limited	100.0%	5,470,927	517,113	366,973	21,879
PT Bank Woori Saudara Indonesia 1906, Tbk	79.9%	2,355,975	502,207	192,719	40,385
AO Woori Bank	100.0%	305,521	49,261	19,433	5,163
Banco Woori Bank do Brasil S.A.	100.0%	179,130	29,984	13,971	1,262
Woori Global Market Asia Limited	100.0%	517,627	121,411	18,748	5,144
WB Finance Co., Ltd.	100.0%	268,794	43,139	24,310	2,421
Woori Bank Europe	100.0%	58,399	58,088	5	(5,959)
Woori Finance Myanmar Co., Ltd.	100.0%	19,340	12,454	4,496	640
Woori Finance Cambodia PLC.	100.0%	93,239	22,106	11,038	2,826
Wealth Development Bank Corp.	51.0%	218,134	33,789	13,668	80
Woori Bank Vietnam Limited	100.0%	954,580	234,026	48,716	10,710

Item 4.D. ***Property, Plants and Equipment***

Our registered office and corporate headquarters, with a total area of approximately 97,222 square meters, are located at 51, Sogong-ro, Jung-gu, Seoul, Korea. Information regarding certain of our properties in Korea as of December 31, 2018 is presented in the following table:

Type of Facility/Building	Location	Area (square meters)
Woori Bank registered office and corporate headquarters	51, Sogong-ro, Jung-gu, Seoul, Korea 04632	97,222
Woori FIS registered office and corporate headquarters	17, World Cup buk-ro 60-gil, Mapo-gu, Seoul, Korea 03921	37,442

As of December 31, 2018, we had a network of 877 banking branches in Korea, 230 of which are housed in buildings owned by us, while the remaining branches are leased properties. Lease terms are generally from two to three years and seldom exceed five years. We also have subsidiaries in the United States, China, Hong Kong, Russia, Indonesia, Cambodia, Brazil, Myanmar, the Philippines, Vietnam and Germany and branches, agencies and representative offices across the world. See Item 4.B. Business Overview Capital Markets Activities International Banking. We do not own any material properties outside of Korea.

The net book value of all the properties owned by us as of December 31, 2018 was 2,441 billion.

Item 4A. UNRESOLVED STAFF COMMENTS

We do not have any unresolved comments from the U.S. Securities and Exchange Commission staff regarding our periodic reports under the Exchange Act.

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Item 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

Item 5.A. Operating Results

Overview

The following discussion is based on our consolidated financial statements, which have been prepared in accordance with IFRS as issued by the IASB. The consolidated financial statements include the accounts of subsidiaries over which substantive control is exercised through either majority ownership of voting stock and/or other means. Investments in joint ventures and associates (which are companies over which we have the ability to exercise significant influence) are accounted for by the equity method of accounting and are reported in investments in joint ventures and associates.

Trends in the Korean Economy

Our financial position and results of operations have been and will continue to be significantly affected by financial and economic conditions in Korea. Substantial growth in lending in Korea to small- and medium-sized enterprises in recent years, and financial difficulties experienced by such enterprises as a result of, among other things, adverse changes in economic conditions in Korea and globally, may lead to increasing delinquencies and a deterioration in overall asset quality in the credit exposures of Korean banks to small- and medium-sized enterprises. Our loans to small- and medium-sized enterprises increased from 74,906 billion as of December 31, 2017 to 79,371 billion as of December 31, 2018. In 2018, we recorded charge-offs of 199 billion in respect of our Won-denominated loans to small- and medium-sized enterprises, compared to charge-offs of 325 billion in 2017. See Item 3.D. Risk Factors Risks relating to our corporate credit portfolio The largest portion of our exposure is to small- and medium-sized enterprises, and financial difficulties experienced by companies in this segment may result in a deterioration of our asset quality and have an adverse impact on us.

In recent years, commercial banks, consumer finance companies and other financial institutions in Korea have also made significant investments and engaged in aggressive marketing in consumer lending (including mortgage and home equity loans), leading to substantially increased competition in this segment. From the second half of 2016 to 2018, the Korean government introduced various measures to tighten regulations on mortgage lending and housing subscription in response to the rapid growth in consumer debt and concerns over speculative investments in real estate in certain areas. Notwithstanding such measures, demand for residential property in certain areas, including Seoul, has continued to increase, and our consumer loan portfolio increased from 109,290 billion as of December 31, 2017 to 117,095 billion as of December 31, 2018. Nevertheless, a decrease in housing prices as a result of the implementation of such measures, together with the high level of consumer debt and rising interest rate levels, could result in declines in consumer spending and reduced economic growth, which may lead to increasing delinquencies and a deterioration in asset quality. In 2018, we recorded charge-offs of 204 billion and provisions for credit losses of 192 billion in respect of our consumer loan portfolio, compared to charge-offs of 147 billion and provisions for credit losses of 152 billion in 2017. See Item 3.D. Risk Factors Risks relating to our consumer credit portfolio.

The Korean economy is closely tied to, and is affected by developments in, the global economy. The overall prospects for the Korean and global economy in 2019 and beyond remain uncertain. In recent years, the global financial markets have experienced significant volatility as a result of, among other things:

a deterioration in economic and trade relations between the United States and its major trading partners, including China;

uncertainty regarding the timing and method of the United Kingdom s exit from the European Union, or Brexit;

financial and social difficulties affecting many countries worldwide, in particular in Latin America and Europe;

the slowdown of economic growth in China and other major emerging market economies;

interest rate fluctuations as well as the possibility of further increases in policy rates by the U.S. Federal Reserve and other central banks; and

political and social instability in various countries in the Middle East, including Syria, Iraq and Egypt.

In light of the high level of interdependence of the global economy, unfavorable changes in the global financial markets, including as a result of any of the foregoing developments, could have a material adverse effect on the Korean economy and financial markets, and in turn on our business, financial condition and results of operations.

We are also exposed to adverse changes and volatility in the global and Korean financial markets as a result of our liabilities and assets denominated in foreign currencies and our holdings of trading and investment securities, including structured products. The value of the Won relative to major foreign currencies in general and the U.S. dollar in particular has fluctuated widely in recent years. A depreciation of the Won will increase our cost of servicing our foreign currency-denominated debt, while continued exchange rate volatility may also result in foreign exchange losses for us. Furthermore, as a result of changing global and Korean economic conditions, there has been volatility in securities prices, including the stock prices of Korean and foreign companies in which we hold an interest. Such volatility has resulted in and may lead to further trading and valuation losses on our trading and investment securities portfolio as well as impairment losses on our investments in joint ventures and associates.

As a result of uncertain conditions in the Korean and global economies and financial markets, as well as factors such as fluctuations in oil and commodity prices, interest and exchange rate fluctuations, higher unemployment, lower consumer confidence, stock market volatility, potential tightening of fiscal and monetary policies and continued tensions with North Korea, the economic outlook for the financial services sector in Korea in 2019 and for the foreseeable future remains uncertain.

Changes in Securities Values, Exchange Rates and Interest Rates

Fluctuations of exchange rates, interest rates and stock prices affect, among other things, the demand for our products and services, the value of and rate of return on our assets, the availability and cost of funding and the financial condition of our customers. The following table shows, for the dates indicated, the stock price index of all equities listed on the KRX KOSPI Market as published in the KOSPI, the Won to U.S. dollar exchange rates and benchmark Won borrowing interest rates.

	June 30, 2014	**Dec. 31, 2014**	**June 30, 2015**	**Dec. 31, 2015**	**June 30, 2016**	**Dec. 31, 2016**	**June 30, 2017**	**Dec. 31, 2017**	**June 30, 2018**
	2,002.21	1,915.59	2,074.20	1,961.31	1,970.35	2,026.46	2,391.79	2,467.49	2,326.13
ange rates[1]	1,011.60	1,090.89	1,117.34	1,169.26	1,154.15	1,203.73	1,143.75	1,067.42	1,111.79
ond rates[2]	3.4%	2.8%	2.5%	2.6%	2.3%	2.8%	2.8%	3.1%	2.9%
nd rates[3]	2.6%	2.1%	1.8%	1.7%	1.3%	1.6%	1.7%	2.1%	2.1%

(1) Represents the noon buying rate on the dates indicated.

(2) Measured by the yield on three-year Korean corporate bonds rated as A+ by the Korean credit rating agencies.

(3) Measured by the yield on three-year treasury bonds issued by the Ministry of Strategy and Finance of Korea.

Changes in Accounting Standards

IFRS 9 *Financial Instruments*, issued by the International Accounting Standard Board in July 2014, is a new accounting standard aimed at improving and simplifying the accounting treatment of financial instruments and is effective for annual periods beginning on or after January 1, 2018. IFRS 9 replaces IAS 39 *Financial Instruments: Recognition and Measurement* and requires all financial assets to be classified and measured on the basis of an entity s business model for managing financial assets and the contractual cash flow characteristics of the financial assets. A new impairment model is introduced which requires recording of allowance for credit losses based on expected credit losses instead of incurred losses (as was the case under IAS 39), and recognition of any subsequent changes in expected credit losses in profit or loss. Also, hedge accounting rules are amended to allow more hedging instruments and hedged items to qualify for hedge accounting. The impact on our financial statements due to the application of IFRS 9 depends on judgments made by us in applying the new standard, the nature of financial instruments held by us and macroeconomic variables.

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We have applied IFRS 9 in our consolidated financial statements as of and for the year ended December 31, 2018. As permitted by the transition rules of IFRS 9, our comparative consolidated financial statements as of and for the years ended December 31, 2016 and 2017 have not been restated to retroactively apply IFRS 9.

The classification of financial assets in accordance with IAS 39 and IFRS 9 as of January 1, 2018 is as follows:

Account	Classification according to IAS 39 (in billions of Won)		Classification according to IFRS 9 (in billions of Won)	
Deposit	Loans and receivables	8,871	Loans and other financial assets at amortized cost	8,871
Deposit	Financial assets at fair value through profit or loss	26	Financial assets at fair value through profit or loss	26
Debt securities	Financial assets at fair value through profit or loss	2,654	Financial assets at fair value through profit or loss[(1)]	2,654
Equity securities	Financial assets at fair value through profit or loss	47	Financial assets at fair value through profit or loss[(1)]	47
Derivatives	Financial assets at fair value through profit or loss	3,116	Financial assets at fair value through profit or loss[(1)]	3,114
Equity securities	Available-for-sale financial assets	1,274	Financial assets at fair value through profit or loss[(1)]	1,275
Equity securities	Available-for-sale financial assets	850	Financial assets at fair value through other comprehensive income	850
Debt securities	Available-for-sale financial assets	47	Financial assets at fair value through profit or loss	47
Debt securities	Available-for-sale financial assets	12,874	Financial assets at fair value through other comprehensive income	12,874
Debt securities	Available-for-sale financial assets	308	Securities at amortized cost	322
Debt securities	Held-to-maturity financial assets	16,749	Securities at amortized cost	16,749
Loans	Loans and receivables	279	Financial assets at fair value through profit or loss[(1)]	280
Loans	Loans and receivables	253,014	Loans and other financial assets at amortized cost	253,014
Derivatives	Derivatives	60	Derivatives	60
Other financial assets	Loans and receivables	6,772	Loans and other financial assets at amortized cost	6,772
Total financial assets		306,941		306,955

(1) Under IAS 39, the embedded derivatives of hybrid financial instruments were accounted for as derivatives assets or liabilities if the criteria for separation of the embedded derivatives were met and the rest of the host contracts in those instruments were recorded as available-for-sale financial assets or loans and receivables. Since IFRS 9

requires financial instruments be accounted for based on the terms of the entire financial instrument, hybrid financial assets are revalued and recorded as financial assets at fair value through profit or loss.

For additional information regarding IFRS 9 and the impact of its application to our consolidated financial statements, see Note 2-(1)-1) of the notes to our consolidated financial statements.

Among other things, the application of IFRS 9 resulted in a one-off increase of 308 billion in our allowance for credit losses and provision for guarantees and loan commitments in the opening balances as of January 1, 2018 for our consolidated statement of financial position. The application of IFRS 9 may continue to result in higher impairment loss allowances that are recognized earlier, on a forward-looking basis and on a broader scope of financial instruments than was the case under IAS 39. In addition, the move from incurred to expected credit losses will have the potential to impact our performance under stressed economic conditions. Measurement requires increased complexity in our impairment modeling as it involves a greater degree of management judgment with respect to forward-looking information. We expect that impairment charges will tend to be more volatile as a result.

Critical Accounting Policies

The notes to our consolidated financial statements contain a summary of our significant accounting policies, including a discussion of recently issued accounting pronouncements. Certain of these policies are critical to the portrayal of our financial condition, since they require management to make difficult, complex or subjective judgments, some of which may relate to matters that are inherently uncertain. We discuss these critical accounting policies below.

Impairment of Loans and Allowance for Credit Losses

We evaluate our portfolio of loans and other financial assets at amortized cost (or loans and receivables) for impairment on an ongoing basis. We have established an allowance for credit losses, which is available to absorb losses in our portfolio of loans and other financial assets at amortized cost (or loans and receivables). If we believe that additions or changes to the allowance for credit losses are required, we record provisions for credit losses (as part of our impairment loss for credit loss), which are treated as charges against current income. Loan exposures that we deem to be uncollectible, including actual loan losses, net of recoveries of previously written-off amounts, are charged directly against the allowance for credit losses.

We have established our allowance for credit losses as of December 31, 2018 in accordance with IFRS 9 and as of December 31, 2016 and 2017 in accordance with IAS 39. See Overview Changes in Accounting Standards.

Our accounting policies under IFRS 9 for losses arising from the impairment of loans and other financial assets at amortized cost and our allowance for credit loss are described in Notes 2-(9)-6) and 3-(3) of the notes to our consolidated financial statements. The new impairment model under IFRS 9 requires the calculation of allowance for credit losses based on expected credit losses instead of incurred credit losses (as was the case under IAS 39) by assessing changes in expected credit losses and recognizing such changes as impairment loss (or reversal of impairment loss) in profit or loss. Under IFRS 9, the allowance required to be established with respect to a loan or financial asset is the amount of the expected 12-month credit loss or the expected lifetime credit loss for the applicable loan or financial asset, according to the three stages of credit risk deterioration since initial recognition, as follows:

- Stage 1 (loans and other financial assets at amortized cost for which credit risk has not significantly increased since initial recognition): the allowance for credit losses must cover expected credit losses due to possible defaults on the relevant loan or financial asset within a 12-month period from the reporting date.

- Stage 2 (loans and other financial assets at amortized cost for which credit risk has significantly increased since initial recognition): the allowance for credit losses must cover expected credit losses from all possible defaults during the expected lifetime of the relevant loan or financial asset.

Stage 3 (credit-impaired loans and other financial assets at amortized cost): the allowance for credit losses must cover expected credit losses from all possible defaults during the expected lifetime of the relevant loan or financial asset.

At the end of every reporting period, we evaluate whether the credit risk with respect to our loans and other financial assets at amortized cost, after taking into account forward-looking information, has significantly increased since the date of their initial recognition. When evaluating whether credit risk has significantly increased, we take into account changes in the probability of default over the remaining life of a loan or financial asset, rather than changes in the amount of expected credit losses relating thereto. We distinguish between corporate and retail exposures in performing such evaluation, and consider factors such as the following as indicators of a significant increase in credit risk:

- the asset quality classification of the loan or financial asset is precautionary or lower;
- payments on the loan or financial asset are more than 30 days past due;
- there has been a significant decrease in the borrower s credit rating;
- in the case of a corporate borrower, the borrower is subject to a warning under an early warning system; or
- in the case of a corporate borrower, the borrower is experiencing financial difficulties (as evidenced by factors such as a capital impairment or an adverse opinion or a disclaimer of opinion by its external auditors).

In establishing our allowance for credit losses, we take into account information available as of the relevant reporting date regarding past events, current economic conditions and forecasts of future economic conditions. The probability of default and expected loss with respect to loans and other financial assets at amortized cost are calculated by considering factors such as borrower type, credit rating and applicable portfolio. In addition, in measuring expected credit loss, we seek to use reasonable and supportable macroeconomic indicators such as economic growth rates, interest rates and stock market index levels in forecasting future economic conditions.

Our consolidated financial statements for the year ended December 31, 2018 included a total allowance for losses on loans and other financial assets at amortized cost of 1,851 billion as of that date. We recorded provisions for credit losses on loans and other financial assets at amortized cost of 415 billion in 2018.

We believe that the accounting estimates related to impairment of loans and other financial assets at amortized cost (or loans and receivables) and our allowance for credit losses are a critical accounting policy because: (1) they are highly susceptible to change from period to period based on our estimates of expected credit and losses relating to our loan portfolio; and (2) any significant difference between expected credit losses on loans and other financial assets at amortized cost (or loans and receivables), as reflected in our allowance for credit losses, and actual losses on loans and other financial assets at amortized cost (or loans and receivables) could require us to record additional provisions for credit losses or charge-offs which, if significant, could have a material impact on our profit. Our estimates of expected credit losses require significant management judgment regarding matters such as the significance of changes in credit risk and probability of default since initial recognition. Actual losses have fluctuated in the past and are expected to continue to do so, based on a variety of factors.

Valuation of Financial Assets and Liabilities

Our accounting policy for determining the fair value of financial assets and liabilities is described in Notes 2-(9)-5), 3-(2) and 11 of the notes to our consolidated financial statements.

The best evidence of fair value is a quoted price in an actively traded market. In the event that the market for a financial asset or liability is not active, a valuation technique is used. The majority of valuation techniques employ only observable market data and, as such, the reliability of the fair value measurement is high. However, certain financial instruments are valued on the basis of valuation techniques that feature one or more significant market inputs that are unobservable. Valuation techniques that rely to a greater extent on unobservable inputs require a higher level of management judgment to calculate a fair value than those based wholly on observable inputs.

Valuation techniques used to calculate fair values are discussed in Notes 2-(9)-5) and 11 of the notes to our consolidated financial statements. The main assumptions and estimates which our management considers when applying a model with valuation techniques are:

The likelihood and expected timing of future cash flows on the instrument. These cash flows are usually governed by the terms of the instrument, although judgment may be required when the ability of the counterparty to service the instrument in accordance with the contractual terms is in doubt. Future cash flows may be sensitive to changes in market rates.

Selecting an appropriate discount rate for the instrument. The determination of this rate is based on an assessment of what a market participant would regard as the appropriate spread of the rate for the instrument over the appropriate risk-free rate.

Judgment to determine what model to use to calculate fair value in areas where the choice of valuation model is particularly subjective (for example, valuation of complex derivative products).

The financial instruments carried at fair value have been categorized under the three levels of the IFRS fair value hierarchy as follows:

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities.

Level 3: Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The fair value hierarchy requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Fair value is a market-based measure considered from the perspective of a market participant. As such, even when market assumptions are not readily available, our own assumptions are intended to reflect those that market participants would use in pricing the asset or liability at the measurement date.

Our consolidated financial statements for the year ended December 31, 2018 included financial assets measured at fair value using a valuation technique of 21,568 billion, representing 89.0% of total financial assets measured at fair value, and financial liabilities measured at fair value using a valuation technique of 2,305 billion, representing 98.7% of total financial liabilities measured at fair value. As used herein, the fair value using a valuation technique means the fair value at Level 2 and Level 3 in the fair value hierarchy.

We believe that the accounting estimates related to the determination of the fair value of financial instruments are a critical accounting policy because: (1) they may be highly susceptible to change from period to period based on factors beyond our control; and (2) any significant difference between our estimate of the fair value of these financial instruments on any particular date and either their estimated fair value on a different date or the actual proceeds that we receive upon sale of these financial instruments could result in valuation losses or losses on disposal which may have a material impact on our profit. Our assumptions about the fair value of financial instruments we hold require significant judgment because actual valuations have fluctuated in the past and are expected to continue to do so, based on a variety of factors.

Deferred Tax Assets

Our accounting policy for the recognition of deferred tax assets is described in Notes 2-(22) and 3-(1) of the notes to our consolidated financial statements.

The recognition of deferred tax assets relies on an assessment of the probability and sufficiency of future taxable profits, future reversals of existing taxable temporary differences and ongoing tax planning strategies.

We recognize deferred tax assets and liabilities for the future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, unused tax losses and unused tax credits. Deferred tax assets are recognized only to the extent it is probable that sufficient taxable profit will be available against which those deductible temporary differences, unused tax losses or unused tax credits can be utilized. This assessment requires significant management judgment and assumptions. In determining the amount of deferred tax assets, we use forecasted operating results, which are based on historical financial performance, approved business plans, including a review of the eligible carry-forward periods, available tax planning opportunities and other relevant considerations.

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Our consolidated financial statements for the year ended December 31, 2018 included deferred tax assets and liabilities of 60 billion and 18 billion, respectively, as of that date.

We believe that the estimates related to our recognition and measurement of deferred tax assets are a critical accounting policy because: (1) they may be highly susceptible to change from period to period based on our assumptions regarding our future profitability; and (2) any significant difference between our estimates of future profits on any particular date and estimates of such future profits on a different date could result in an income tax expense or benefit which may have a material impact on our net income from period to period. Our assumptions about our future profitability require significant judgment and are inherently subjective.

Goodwill

Our accounting policy for goodwill is described in Note 2-(13) of the notes to our consolidated financial statements.

Goodwill is recognized as the excess of (i) the sum of the consideration transferred and the amount of any non-controlling interest in the acquiree over (ii) the net of the acquisition-date fair value of the identifiable assets acquired and the liabilities assumed. If the net amount of the acquisition-date fair value of the identifiable assets acquired and the liabilities assumed exceeds the sum of the consideration transferred and the amount of any non-controlling interest in the acquiree, such excess is recognized as a gain as of the acquisition date.

Goodwill is not depreciated and is stated at cost less accumulated impairment losses. However, goodwill that forms part of the carrying amount of an investment in an associate or a joint venture is not separately recognized and an impairment loss recognized is not allocated to any asset, including goodwill, that forms part of the carrying amount of the investment in the associate or the joint venture.

The review of goodwill impairment reflects our management s best estimate of the certain factors. For example:

- The future cash flows of the cash generating units, or CGUs, are sensitive to the cash flows projected for the periods for which detailed forecasts are available and to assumptions regarding the long-term pattern of sustainable cash flows thereafter. Forecasts are compared with actual performance and verifiable economic data, but they necessarily and appropriately reflect our management s view of future business prospects at the time of the assessment.

- The rates used to discount future expected cash flows are based on the costs of capital assigned to individual CGUs and can have a significant effect on their valuation. The cost of capital percentage is generally derived from a Capital Asset Pricing Model, which incorporates inputs reflecting a number of financial and economic variables, including the risk-free interest rate in the country concerned and a premium for the inherent risk of the business being evaluated. These variables are subject to fluctuations in external market rates and economic conditions beyond our control and therefore require the exercise of significant judgment and are consequently subject to uncertainty.

A decline in a CGU s expected cash flows or an increase in its cost of capital reduces the CGU s estimated recoverable amount. If this is lower than the carrying value of the CGU, a charge for impairment of goodwill is recognized in the statement of comprehensive income for the year.

The accuracy of forecast cash flows is subject to a high degree of uncertainty in volatile market conditions. In such market conditions, our management retests goodwill for impairment more frequently than once a year to ensure that the assumptions on which the cash flow forecasts are based continue to reflect current market conditions and management s best estimate of future business prospects.

Our consolidated financial statements for the year ended December 31, 2018 included the value of goodwill of 154 billion as of that date.

We believe that the accounting estimates related to the fair values of our acquired goodwill are a critical accounting policy because: (1) they may be highly susceptible to change from period to period since they

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require assumptions about future cash flows, run-off rates and profitability; and (2) any significant changes in our estimates from period to period could result in the recognition of impairment losses which may have a material impact on our net income. Our assumptions about estimated future cash flows, run-off rates and profitability require significant judgment and the fair values of the goodwill could fluctuate in the future, based on a variety of factors.

Defined Benefit Obligations

Our accounting policy for the recognition of defined benefit obligations is described in Notes 2-(21) and 3-(4) of the notes to our consolidated financial statements.

We operate both defined contribution and defined benefit pension plans for our employees. Contributions to the defined contribution plan are recognized as employee benefit expenses in the period in which an employee has rendered services entitling them to the contributions. For defined benefit pension plans, the cost of providing benefits is determined using the Projected Unit Credit Method, with actuarial valuations being carried out at the end of each reporting period. Remeasurement, which comprises actuarial gains and losses, the effect of the changes to the asset ceiling (if applicable) and the return on plan assets (excluding interest), is reflected immediately in our statement of financial position with a charge or credit recognized in other comprehensive income in the period in which it occurs.

Remeasurement recognized in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to profit or loss. Past service cost is recognized in profit or loss in the period of a plan amendment. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit liability or asset. Defined benefit costs are composed of service cost (including current and past service costs, as well as gains and losses on curtailments and settlements), net interest expense (income) and remeasurement. We present the service cost and net interest expense (income) components in profit or loss, and the remeasurement component in other comprehensive income. Curtailment gains and losses are accounted for as past service costs.

The defined benefit obligations recognized in our consolidated statement of financial position represent the actual deficit or surplus in our defined benefit plans. Any surplus resulting from this calculation is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans. Liabilities for termination benefits are recognized at the earlier of either (i) when we are not able to cancel our proposal for termination benefits, or (ii) when we have recognized the cost of restructuring that accompanies the payment of termination benefits.

We believe that the estimates related to our recognition of defined benefit obligations are a critical accounting policy because: (1) they may be highly susceptible to change from period to period because they require us to make assumptions about discount rates, future wage growth rates, retirement rates and mortality rates; and (2) any significant remeasurement of net defined benefit obligations may have a material impact on our other comprehensive income and retained earnings. Our actuarial assumptions require significant judgment due to the complexities involved in the valuation of our defined benefit obligations and their long-term nature.

For an analysis of the sensitivity of our defined benefit obligations to changes in actuarial assumptions, see Note 24 of the notes to our consolidated financial statements.

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Results of Operations

Net Interest Income

The following table shows, for the periods indicated, the principal components of our interest income:

	Year ended December 31,			Percentage change	
	2016	2017	2018	2017/2016	2018/2017
	(in billions of Won)			(%)	
Interest income					
Financial assets at fair value through profit or loss (IFRS 9)			54	N/A[1]	N/A
Financial assets at fair value through profit or loss (IAS 39)	63	53		(15.9)%	N/A
Financial assets at fair value through other comprehensive income			280	N/A	N/A
Available-for-sale financial assets	340	239		(29.7)	N/A
Held-to-maturity financial assets	360	308		(14.4)	N/A
Financial assets at amortized cost:					
Securities at amortized cost			377	N/A	N/A
Loans and other financial assets at amortized cost:					
Interest on due from banks			113	N/A	N/A
Interest on loans			8,832	N/A	N/A
Interest on other receivables			28	N/A	N/A
Subtotal			9,350	N/A	N/A
Loans and receivables:					
Interest on due from banks	75	83		10.7	N/A
Interest on loans	7,635	7,836		2.6	N/A
Interest on other receivables	39	31		(20.5)	N/A
Subtotal	7,749	7,950		2.6	N/A
Total interest income	8,512	8,551	9,684	0.5	13.2%
Interest expense					
Deposits	2,547	2,380	2,917	(6.6)	22.6
Borrowings	215	238	307	10.7	29.0
Debentures	619	639	720	3.2	12.7
Others	111	73	89	(34.2)	21.9
Total interest expense	3,492	3,330	4,033	(4.6)	21.1
Net interest income	5,020	5,221	5,651	4.0%	8.2%

Net interest margin[2]	1.71%	1.74%	1.80%

[1] N/A = not applicable.
[2] The ratio of net interest income to average interest-earning assets.

Comparison of 2018 to 2017

Interest Income. Interest income increased 13.2% from 8,551 billion in 2017 to 9,684 billion in 2018, primarily due to a 12.7% increase in interest on loans. The average yield on interest-earning assets increased 23 basis point from 2.85% in 2017 to 3.08% in 2018, which reflected an increase in the general level of interest rates in Korea in 2018 compared to 2017. The effect of this increase was enhanced by a 5.0% increase in average balance of interest-earning assets from 299,691 billion in 2017 to 314,642 in 2018, principally due to the growth of our loan portfolio.

A substantial majority of loans that were previously classified as loans and receivables under IAS 39 are classified since 2018 as loans and other financial assets at amortized cost, which is part of financial assets at amortized cost, under IFRS 9, while a small portion of loans that were previously classified as loans and receivables under IAS 39 are classified since 2018 as financial assets at fair value through profit or loss under IFRS 9. See Overview Changes in Accounting Standards. The 12.7% increase in interest on loans from 7,836 billion in 2017 to 8,832 billion in 2018 was principally due to:

- a 51 basis point increase in the average yield on general purpose household loans (including home equity loans) from 3.44% in 2017 to 3.95% in 2018, which was enhanced by a 0.9% increase in the average volume of such loans from 66,420 billion in 2017 to 67,042 billion in 2018;

- a 9.4% increase in the average volume of commercial and industrial loans from 95,349 billion in 2017 to 104,269 billion in 2018, which was enhanced by a 1 basis point increase in the average yield on such loans from 3.29% in 2017 to 3.30% in 2018; and

- a 26 basis point increase in the average yield on mortgage loans from 2.96% in 2017 to 3.22% in 2018, which was enhanced by a 1.9% increase in the average volume of such loans from 47,545 billion in 2017 to 48,445 billion in 2018.

The average yields on general purpose household loans, commercial and industrial loans and mortgage loans increased mainly due to the increase in the general level of interest rates in Korea in 2018 compared to 2017. The average volumes of general purpose household loans, commercial and industrial loans and mortgage loans increased primarily due to increased demand from borrowers in anticipation of further increases in the general level of interest rates in Korea.

Overall, the average yield on loans increased by 23 basis points from 3.30% in 2017 to 3.53% in 2018, while the average volume of loans increased 5.4% from 237,340 billion in 2017 to 250,260 billion in 2018.

Our debt securities portfolio consists primarily of debt securities held for investment (as opposed to trading) purposes, including those issued by Korean financial institutions, corporations and government-owned or controlled enterprises. Investment debt securities that were previously classified as held-to-maturity financial assets under IAS 39 are classified since 2018 as securities at amortized cost, which is part of financial assets at amortized cost, under IFRS 9. A substantial majority of investment debt securities that were previously classified as available-for-sale financial assets under IAS 39 are classified since 2018 as financial assets at fair value through other comprehensive income under IFRS 9, while a small portion of investment debt securities that were previously classified as available-for-sale financial assets under IAS 39 are classified since 2018 as either securities at amortized cost or financial assets at fair value through profit or loss under IFRS 9. See Overview Changes in Accounting Standards. Interest income on investment debt securities classified in 2018 as either securities at amortized cost or financial assets at fair value through other comprehensive income, as compared to interest income on investment debt securities classified in 2017 as either held-to-maturity or available-for-sale financial assets, increased 19.9% from 548 billion in 2017 to 657 billion in 2018. Such increase was primarily due to a 36 basis point increase in the average yield on such investment debt securities from 1.67% in 2017 to 2.03% in 2018, which was partially offset by a 1.5% decrease in the average balance of such investment debt securities from 32,881 billion in 2017 to 32,404 billion in 2018. The increase in the average yield on investment debt securities resulted mainly from the increase in the general level of interest rates in Korea in 2018 compared to 2017. The decrease in the average balance of investment debt securities principally reflected a decrease in the amount of financial institution bonds that we held as investment debt securities.

Interest Expense. Interest expense increased 21.1% from 3,330 billion in 2017 to 4,033 billion in 2018, primarily due to a 22.6% increase in interest expense on deposits, which was enhanced by a 12.7% increase in interest expense on debentures and a 29.0% increase in interest expense on borrowings. The average cost of interest-bearing liabilities increased 18 basis points from 1.16% in 2017 to 1.34% in 2018, which mainly reflected the increase in the general level of interest rates in Korea in 2018 compared to 2017. The effect of this increase was enhanced by a 4.9% increase in the average balance of interest-bearing liabilities from 286,164 billion in 2017 to 300,174 billion in 2018, principally due to an increase in the average balance of deposits.

The 22.6% increase in interest expense on deposits from 2,380 billion in 2017 to 2,917 billion in 2018 resulted mainly from:

- a 15 basis point increase in the average cost of Won-denominated time and savings deposits from 1.08% in 2017 to 1.23% in 2018, which was enhanced by a 5.7% increase in the average balance of such deposits from 186,277 billion in 2017 to 196,806 billion in 2018; and

- a 32 basis point increase in the average cost of other deposits (other than Won-denominated demand deposits, time and savings deposits and certificates of deposit) from 0.99% in 2017 to 1.31% in 2018, which was enhanced by a 7.4% increase in the average balance of such deposits from 24,444 billion in 2017 to 26,254 billion in 2018.

The increase in the average cost of Won-denominated time and savings deposits and other deposits was primarily attributable to the increase in the general level of interest rates in Korea in 2018 compared to 2017, while the increase in the average volume of such deposits mainly reflected customers continuing preference for low-risk products and institutions in Korea in light of the continuing uncertainty in financial markets in 2018.

Overall, the average cost of deposits increased by 17 basis points from 1.06% in 2017 to 1.23% in 2018, while the average volume of deposits increased 5.8% from 223,593 billion in 2017 to 236,663 billion in 2018.

The 12.7% increase in interest expense on debentures from 639 billion in 2017 to 720 billion in 2018 was primarily due to a 6.8% increase in the average balance of debentures from 25,865 billion in 2017 to 27,613 billion in 2018, which was mainly attributable to our increased use of debentures to meet our funding needs. Such increase was enhanced by a 14 basis point increase in the average cost of debentures from 2.47% in 2017 to 2.61% in 2018, which mainly reflected the increase in the general level of interest rates in Korea in 2018 compared to 2017.

The 29.0% increase in interest expense on borrowings from 238 billion in 2017 to 307 billion in 2018 was primarily due to a 60 basis point increase in the average cost of borrowings from 1.35% in 2017 to 1.95% in 2018, which mainly reflected the increase in the general level of interest rates in Korea in 2018 compared to 2017. The effect of such increase was offset in part by a 10.8% decrease in the average balance of borrowings from 17,669 billion in 2017 to 15,752 billion in 2018.

Net Interest Margin. Net interest margin represents the ratio of net interest income to average interest-earning assets. Our overall net interest margin increased from 1.74% in 2017 to 1.80% in 2018, as an 8.2% increase in our net interest income from 5,221 billion in 2017 to 5,651 billion in 2018 outpaced a 5.0% increase in the average balance of our interest-earning assets from 299,691 billion in 2017 to 314,636 billion in 2018. The growth in average interest-earning assets was largely matched by a 4.9% increase in average interest-bearing liabilities from 286,164 billion in 2017 to 300,174 billion in 2018, but the increase in interest income outpaced the increase in interest expense, resulting in the increase in net interest income. The magnitude of this increase was enhanced by an increase in our net interest spread, which represents the difference between the average yield on our interest-earning assets and the average cost of our interest-bearing liabilities, from 1.69% in 2017 to 1.74% in 2018. The increase in net interest spread resulted from a larger increase in the average yield on interest-earning assets between the two periods compared to the increase in the average cost of interest-bearing liabilities, as interest rates on interest-bearing liabilities adjusted later than those on interest-earning assets in the context of the higher interest rate environment in 2018.

Comparison of 2017 to 2016

Interest income. Interest income increased 0.5% from 8,512 billion in 2016 to 8,551 billion in 2017, primarily as a result of a 2.6% increase in interest on loans, which was partially offset by a 21.7% decrease in interest on investment debt securities. The average balance of our interest-earning assets increased 1.8% from 294,264 billion in 2016 to 299,691 billion in 2017, principally due to growth in our loan portfolio as well as financial assets portfolio. The effect of this increase was partially offset by a 4 basis point decrease in the average yield on our interest-earning assets from 2.89% in 2016 to 2.85% in 2017, which reflected a decrease in the general level of interest rates in Korea in 2017 compared to 2016.

The 2.6% increase in interest on loans from 7,635 billion in 2016 to 7,836 billion in 2017 was primarily due to:

- a 7.3% increase in the average volume of general purpose household loans from 61,918 billion in 2016 to 66,420 billion in 2017, which was enhanced by a 3 basis point increase in the average yield on such loans from 3.41% in 2016 to 3.44% in 2017; and

- a 5.6% increase in the average volume of mortgage loans from 45,007 billion in 2016 to 47,545 billion in 2017, which was enhanced by a 2 basis point increase in the average yield on such loans from 2.94% in 2016 to 2.96% in 2017.

The effect of the above increases was offset in part by a 2.9% decrease in the average volume of commercial and industrial loans from 98,202 billion in 2016 to 95,349 billion in 2017, which in turn was partially offset by a 1 basis point increase in the average yield on such loans from 3.28% in 2016 to 3.29% in 2017.

The increase in the average volume of general purpose household loans and mortgage loans was primarily due to increased demand for such loans among consumers in Korea. The average yields on general purpose household loans and mortgage loans increased mainly due to an increase in interest rates for loans in Korea commencing in the second half of 2017. The decrease in the average volume of commercial and industrial loans mainly reflected a decrease in loans to certain large corporate borrowers, primarily as a result of our efforts to decrease our exposure to such borrowers and diversify our loan portfolio.

Overall, the average volume of our loans increased 1.3% from 234,287 billion in 2016 to 237,340 billion in 2017, and the average yield on our loans increased 4 basis points, from 3.26% in 2016 to 3.30% in 2017.

The 21.9% decrease in interest on investment debt securities from 700 billion in 2016 to 548 billion in 2017 was primarily due to a 56 basis point decrease in the average yield on such assets from 2.23% in 2016 to 1.67% in 2017, which was partially offset by a 4.9% increase in the average balance of such assets from 31,348 billion in 2016 to 32,881 billion in 2017. The decrease in the average yield on investment debt securities resulted mainly from the decrease in the general level of interest rates in Korea in 2017 compared to 2016. The increase in the average balance of investment debt securities principally reflected an increase in the amount of financial institution bonds that we held as investment debt securities.

Interest expense. Interest expense decreased 4.6% from 3,492 billion in 2016 to 3,330 billion in 2017, primarily due to a 6.6% decrease in interest expense on deposits. The average balance of interest-bearing liabilities increased 1.9% from 280,732 billion in 2016 to 286,164 billion in 2017, principally due to an increase in the average balance of deposits and debentures. The effect of this increase was more than offset by a decrease of 8 basis points in the average cost of interest-bearing liabilities from 1.24% in 2016 to 1.16% in 2017, which was driven mainly by a decrease in the average cost of debentures and deposits.

The 6.6% decrease in interest expense on deposits from 2,547 billion in 2016 to 2,380 billion in 2017 resulted mainly from a 7.3% decrease in interest expense on Won-denominated time and savings deposits from 2,166 billion in 2016 to 2,008 billion in 2017. The decrease in interest expense on Won-denominated time and savings deposits was mainly due to a 12 basis point decrease in the average cost of such deposits from 1.20% in 2016 to 1.08% in 2017, which was partially offset by a 2.9% increase in the average balance of such deposits from 181,073 billion in 2016 to 186,277 billion in 2017. The decrease in the average cost of Won-denominated time and savings deposits was primarily attributable to the decrease in the general level of interest rates in Korea in 2017 compared to 2016, while the increase in the average volume of such deposits mainly reflected customers continuing preference for low-risk products and institutions in Korea in light of the continuing uncertainty in financial markets in 2017.

Overall, the average volume of our deposits increased 2.7% from 217,696 billion in 2016 to 223,593 billion in 2017, while the average cost of our deposits decreased 11 basis points from 1.17% in 2016 to 1.06% in 2017.

Interest expense on debentures increased 3.2% from 619 billion in 2016 to 639 billion in 2017, primarily due to a 12.5% increase in the average balance of debentures from 22,988 billion in 2016 to

25,865 billion in 2017, which was mainly attributable to our increased use of debentures to meet our funding needs. Such increase was partially offset by a 22 basis point decrease in the average cost of debentures from 2.69% in 2016 to 2.47% in 2017, which mainly reflected the lower interest rate environment in Korea in 2017 compared to 2016.

Net interest margin. Our overall net interest margin increased from 1.71% in 2016 to 1.74% in 2017, as a 4.0% increase in net interest income from 5,020 billion in 2016 to 5,221 billion in 2017 outpaced a 1.8% increase in the average balance of our interest-earning assets from 294,264 billion in 2016 to 299,691 billion in 2017. The effect of the increase in interest income was enhanced by a decrease in interest expense, resulting in an increase in net interest income, while the growth in average interest-earning assets was largely matched by a 1.9% increase in average interest-bearing liabilities from 280,732 billion in 2016 to 286,164 billion in 2017. The increase in net interest margin was driven mainly by an increase in our net interest spread from 1.65% in 2016 to 1.69% in 2017. The increase in our net interest spread reflected a larger decrease in the average cost of our interest-bearing liabilities, compared to the decrease in the average yield on our interest-earning assets from 2016 to 2017, which was primarily attributable to the earlier adjustment of interest rates on interest-earning assets compared to interest rates on interest-bearing liabilities in the context of an increase in the general level of interest rates in Korea commencing in the second half of 2017.

Impairment Losses Due to Credit Loss

The following table shows, for the periods indicated, the components of our impairment losses due to credit loss.

	Year ended December 31,			**Percentage change**	
	2016	**2017**	**2018**	**2017 / 2016**	**2018 / 2017**
	(in billions of Won)			**(%)**	
Impairment loss due to credit loss on financial assets measured at fair value through other comprehensive income			(2)	N/A[1]	N/A
Impairment loss due to credit loss on securities at amortized cost			(2)	N/A	N/A
Provisions for credit loss on loans and other financial assets at amortized cost			(415)	N/A	N/A
Provisions for credit losses	(891)	(862)		(3.3)%	N/A
Reversal of provisions on guarantees	60	55	106	(8.3)	92.7%
Reversal of provisions on (provisions for) unused loan commitments	(3)	22	(17)	N/M[2]	N/M
Total impairment losses due to credit loss	(834)	(785)	(330)	(5.9)%	(58.0)%

(1) N/A = not applicable.
(2) N/M = not meaningful.

Comparison of 2018 to 2017

Our impairment losses due to credit loss decreased 58.0% from 785 billion in 2017 to 330 billion in 2018, primarily due to a 51.9% decrease in provisions for credit loss on loans and other financial assets at amortized cost in 2018 compared to provisions for credit losses in 2017, which was enhanced by a 92.7% increase in reversal of provisions on guarantees. Such impairment losses were measured under IFRS 9 in 2018, as opposed to IAS 39 in 2017, and as of January 1, 2018, we recognized in retained earnings a (294) billion adjustment relating to the adoption of IFRS 9, which reflected an increase in allowances for credit losses. See Item 4.B. Business Overview Assets and Liabilities Asset Quality of Loans Loan Loss Provisioning Policy.

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The 51.9% decrease from provisions for credit losses of 862 billion in 2017 to provisions for credit loss on loans and other financial assets at amortized cost of 415 billion in 2018 was primarily due to a net reversal of loan loss allowances for corporate loans in 2018, mainly reflecting an improvement in the overall asset quality of such loans, which was partially offset by an increase in loan loss provisions for consumer loans, principally as a result of an increase in the outstanding balance of our consumer loans. The 92.7% increase in reversal of provisions on guarantees from 55 billion in 2017 to 106 billion in 2018 was mainly attributable to an improvement in the financial condition of certain corporate customers on behalf of which we had extended guarantees.

Comparison of 2017 to 2016

Our impairment losses due to credit loss decreased 5.9% from 834 billion in 2016 to 785 billion in 2017, primarily due to a 3.3% decrease in provisions for credit losses and a reversal of provisions for loan commitments.

The 3.3% decrease in provisions for credit losses from 891 billion in 2016 to 862 billion in 2017 was mainly attributable to a reversal of provisions primarily caused by debt-to-equity swaps of certain corporate bonds and changes in exchange rates, which was partially offset by an increase in provisions for credit losses on consumer loans.

Provisions for loan commitments changed from net provisions of 3 billion in 2016 to a net reversal of provisions of 22 billion in 2017, principally as a result of our efforts to eliminate undrawn loan commitments of corporate borrowers by monitoring the credit activity of such borrowers.

Allowance for Credit Losses

For information on our allowance for credit losses, see Item 5.A. Operating Results Critical Accounting Policies Impairment of Loans and Allowance for Credit Losses and Item 4.B. Business Overview Assets and Liabilities Loan Portfolio Allocation and Analysis of Allowances for Credit Losses.

Corporate Loans

The following table shows, for the periods indicated, certain information regarding our impaired corporate loans (including government loans and bank loans):

	As of December 31,		
	2016	**2017**	**2018**
Impaired corporate loans as a percentage of total corporate loans	1.5%	1.2%	0.7%
Allowance for credit losses for corporate loans as a percentage of total corporate loans	1.2	1.0	0.9
Allowance for credit losses for corporate loans as a percentage of impaired corporate loans	80.2	82.6	120.0
Net charge-offs of corporate loans as a percentage of total corporate loans	0.4	0.2	0.1

During 2018, impaired corporate loans, allowance for credit losses for corporate loans and net charge-offs, each as a percentage of total corporate loans, decreased primarily due to an improvement in the overall credit quality of our corporate loans, as well as the application of modified criteria for the determination of loan impairment under IFRS 9. Such decrease was enhanced by a slight increase in the total amount of our corporate loans from 136,676 billion as of December 31, 2017 to 136,888 billion as of December 31, 2018. However, allowance for credit losses for corporate loans as a percentage of impaired corporate loans increased during 2018, as an 11.4% decrease in allowance for credit losses for corporate loans from 1,383 billion as of December 31, 2017 to 1,225 billion as of December 31, 2018 was outpaced by a 39.0% decrease in impaired corporate loans from 1,674 billion as of December 31, 2017 to 1,021 billion as of December 31, 2018, which was mainly attributable to improved credit ratings of certain corporate borrowers and redemptions of such loans.

During 2017, impaired corporate loans, allowance for credit losses for corporate loans and net charge-offs, each as a percentage of total corporate loans, decreased due to an improvement in the overall credit quality of our corporate loans, as well as an increase in the total amount of our corporate loans from 125,643 billion as of December 31, 2016 to 136,676 billion as of December 31, 2017. However, allowance for credit losses for corporate loans as a percentage of impaired corporate loans increased during 2017, as a 9.5% decrease in allowance for credit losses for corporate loans from 1,528 billion as of December 31, 2016 to 1,383 billion as of December 31, 2017 was outpaced by a 13.6% decrease in impaired corporate loans from 1,905 billion as of December 31, 2016 to 1,646 billion as of December 31, 2017, which was mainly attributable to debt-to-equity conversions of such loans.

Consumer Loans and Credit Card Balances

The following table shows, for the periods indicated, certain information regarding our impaired loans to the consumer sector, excluding credit card balances:

	As of December 31,		
	2016	**2017**	**2018**
Impaired consumer loans as a percentage of total consumer loans	0.3%	0.3%	0.3%
Allowance for credit losses for consumer loans as a percentage of total consumer loans	0.2	0.2	0.3
Allowance for credit losses for consumer loans as a percentage of impaired consumer loans	52.5	64.7	75.2
Net charge-offs of consumer loans as a percentage of total consumer loans	0.1	0.1	0.1

During 2018, impaired consumer loans and net charge-offs, each as a percentage of total consumer loans, remained stable. However, allowance for credit losses for consumer loans as a percentage of total consumer loans and as a percentage of impaired consumer loans increased, primarily due to a one-off increase in allowance for credit losses for consumer loans in connection with the application of IFRS 9 in the opening balances as of January 1, 2018. Such increase contributed to a 43.4% increase in the level of our allowance for credit losses for consumer loans from 205 billion as of December 31, 2017 to 294 billion as of December 31, 2018, which outpaced a 7.1% increase in total consumer loans from 109,290 billion as of December 31, 2017 to 117,095 billion as of December 31, 2018 as well as a 23.3% increase in impaired consumer loans from 317 billion as of December 31, 2017 to 391 billion as of December 31, 2018.

During 2017, impaired consumer loans, allowance for credit losses for consumer loans and net charge-offs of consumer loans, each as a percentage of total consumer loans, remained stable. However, allowance for credit losses for consumer loans as a percentage of impaired consumer loans increased, as the degree of overall impairment of our impaired consumer loans became more severe in 2017 compared to 2016, resulting in a 22.0% increase in the level of our allowance for credit losses for consumer loans from 168 billion as of December 31, 2016 to 205 billion as of December 31, 2017, which outpaced a 4.6% increase in impaired consumer loans from 303 billion as of December 31, 2016 to 317 billion as of December 31, 2017.

The following table shows, for the periods indicated, certain information regarding our impaired credit card balances:

	As of December 31,		
	2016	**2017**	**2018**
	2.3%	2.6%	2.6%

Impaired credit card balances as a percentage of total credit card balances[1]			
Allowance for credit losses for credit card balances as a percentage of total credit card balances[1]	2.3	2.7	3.2
Allowance for credit losses for credit card balances as a percentage of impaired credit card balances[1]	102.0	102.2	124.4
Net charge-offs of credit card balances as a percentage of total credit card balances[1]	3.0	2.6	2.3

(1) Includes corporate credit card balances.

During 2018, while impaired credit card balances as a percentage of total credit card balances remained stable, net charge-offs of credit card balances as a percentage of total credit card balances decreased mainly as a

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result of a 17.9% increase in the total amount of our credit card balances from 6,827 billion as of December 31, 2017 to 8,051 billion as of December 31, 2018. However, allowance for credit losses for credit card balances as a percentage of total credit card balances and as a percentage of impaired credit card balances increased, primarily due to a one-off increase in allowance for credit losses for credit card balances in connection with the application of IFRS 9 in the opening balances as of January 1, 2018, which contributed to a 42.9% increase in the level of our allowance for credit losses for credit card balances from 182 billion as of December 31, 2017 to 260 billion as of December 31, 2018.

During 2017, impaired credit card balances and allowance for credit losses for credit card balances, each as a percentage of total credit card balances, increased mainly due to a deterioration in the overall credit quality of our credit card portfolio, which resulted in an increase in the level of our allowance for credit losses for credit card balances from 155 billion as of December 31, 2016 to 182 billion as of December 31, 2017. Allowance for credit losses for credit card balances as a percentage of impaired credit card balances also increased as the degree of overall impairment of our impaired credit card balances became more severe in 2017 compared to 2016. Net charge-offs of credit card balances as a percentage of total credit card balances decreased mainly as a result of lower net charge-offs, as well as an increase in the total amount of our credit card balances.

Net Fees and Commissions Income

The following table shows, for the periods indicated, the components of our net fees and commissions income:

	Year ended December 31,			**Percentage change**	
	2016	**2017**	**2018**	**2017/2016**	**2017/2018**
	(in billions of Won)			**(%)**	
Fees and commissions income	1,865	2,069	1,681	10.9%	(18.8)%
Fees and commissions expense	(928)	(999)	(611)	7.7	(38.8)
Total fees and commissions income, net	937	1,070	1,070	14.2%	0.0%

Comparison of 2018 to 2017

Our net fees and commissions income remained stable at 1,070 billion in 2017 and 2018, as an 18.8% decrease in fees and commissions income from 2,069 billion in 2017 to 1,681 billion in 2018 was offset by a 38.8% decrease in fees and commissions expense from 999 billion in 2017 to 611 billion in 2018. The 18.8% decrease in fees and commissions income was primarily due to a 44.1% decrease in credit card fees from 1,072 billion in 2017 to 599 billion in 2018, which was attributable mainly to our adoption of IFRS 15 in 2018, pursuant to which rewards and points provided to credit card users are deducted from revenue as they are considered as consideration provided to customers. As a result of such change to our accounting policies, fees and commissions received on credit cards and fees and commissions paid on credit cards were both reduced by 526 billion in 2018. See Note 2-(1)-1)-e) of the notes to our consolidated financial statements included elsewhere in this annual report. The 38.8% decrease in fees and commissions expense was principally due to a 48.2% decrease in credit card commissions from 828 billion in 2017 to 429 billion in 2018, which was attributable mainly to our adoption of IFRS 15 in 2018, as discussed above.

Comparison of 2017 to 2016

Our net fees and commissions income increased 14.2% from 937 billion in 2016 to 1,070 billion in 2017, as a 10.9% increase in fees and commissions income from 1,865 billion in 2016 to 2,069 billion in 2017 outpaced a 7.7% increase in fees and commissions expense from 928 billion in 2016 to 999 billion in 2017. The 10.9% increase in fees and commissions income was mainly the result of a 12.3% increase in credit card fees from 955 billion in 2016 to 1,072 billion in 2017, which primarily reflected an increase in the average volume of credit card receivables as well as an increase in credit card issuances. Such increase was enhanced by a 75.3% increase in other fee income from 93 billion in 2016 to 163 billion in 2017, which was

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primarily attributable to an increase in fee income from trust management services. The 7.7% increase in fees and commissions expense was principally due to an 8.8% increase in credit card commissions from 761 billion in 2016 to 828 billion in 2017, which mainly reflected the increase in the average volume of credit card receivables.

For further information regarding our net fees and commissions income, see Note 34 of the notes to our consolidated financial statements included elsewhere in this annual report.

Net Gain on Financial Assets

The following table shows, for the periods indicated, the components of our net gain on financial assets:

	Year ended December 31,			Percentage change	
	2016	2017	2018	2017/2016	2018/2017
	(in billions of Won)			(%)	
Net gain on financial assets at fair value through profit or loss (IFRS 9)			214	N/A[2]	N/A
Net gain (loss) on financial assets at fair value through profit or loss (IAS 39)	114	(105)		N/M[3]	N/A
Net gain on financial assets at fair value through other comprehensive income			2	N/A	N/A
Net gain (loss) on available-for-sale financial assets[1]	(1)	193		N/M	N/A
Net gain on disposals of financial assets at amortized cost			80	N/A	N/A
Total net gain on financial assets	113	88	296	(22.1)%	236.4%

(1) Includes impairment losses on available-for-sale financial assets of 50 billion in 2016 and 31 billion in 2017.
(2) N/A = not applicable.
(3) N/M = not meaningful.

Comparison of 2018 to 2017

Our net gain on financial assets increased 236.4% from 88 billion in 2017 to 296 billion in 2018. This increase was primarily attributable to a change in net gain (loss) on financial instruments at fair value through profit or loss from a net loss of 105 billion in 2017 to a net gain of 214 billion in 2018. Financial instruments at fair value through profit or loss under IFRS 9 include all financial instruments at fair value through profit or loss that were classified as such under IAS 39 in 2017 as well as certain other financial instruments that were classified as available-for-sale financial assets and loans and receivables under IAS 39 in 2017. See Overview Changes in Accounting Standards. The effect of such change was partially offset by a 99.0% decrease in net gain on available-for-sale financial assets of 193 billion in 2017 compared to net gain on financial assets at fair value through other comprehensive income of 2 billion in 2018.

The change in net gain (loss) on financial instruments at fair value through profit or loss from a net loss to a net gain was principally the result of a significant increase in net gain on financial instruments held for trading of 6 billion in 2017 compared to net gain on financial instruments at fair value through profit or loss mandatorily measured at fair value of 197 billion in 2018, which was enhanced by a change to a net gain on financial instruments at fair value through profit or loss designated as upon initial recognition of 17 billion in 2018 compared to a net loss on financial instruments designated as at fair value through profit or loss of 111 billion in 2017. The significant increase in net gain on financial instruments held for trading in 2017 compared to net gain on financial instruments at fair value through profit or loss mandatorily measured at fair value in 2018 was primarily due to a significant increase in gains on valuation of securities from 3 billion in 2017 to 137 billion in 2018, which was enhanced by a significant increase in net gain on transactions and valuation of derivatives held for trading from 3 billion in 2017 to 66 billion in 2018. Derivatives held for trading were classified as financial assets held for trading under IAS 39 in 2017 but are classified since 2018 as financial assets at fair value through profit or loss under IFRS 9. The change to a net gain on financial instruments at fair value through profit or loss designated as upon initial recognition in 2018, compared to a net loss on financial instruments designated as at fair value through profit or loss in 2017, resulted mainly from a change in net gain (loss) on equity-linked securities from a net loss of 112 billion in 2017 to a net gain of 16 billion in 2018.

The 99.0% decrease in net gain on available-for-sale financial assets compared to net gain on financial assets at fair value through other comprehensive income resulted mainly from a 99.1% decrease in gains on transaction of securities from 224 billion in 2017 to 2 billion in 2018. Such decrease was attributable primarily to the reclassification of certain equity and debt securities that were classified as available-for-sale financial assets in 2017 under IAS 39 to classifications other than financial assets at fair value through other comprehensive income, including financial assets at fair value through profit or loss and securities at amortized cost, in 2018 under IFRS 9. See Overview Changes in Accounting Standards.

Comparison of 2017 to 2016

Our net gain on financial assets decreased 22.1% from 113 billion in 2016 to 88 billion in 2017, primarily as a result of a change in net gain (loss) on financial assets at fair value through profit or loss from a net gain of 114 billion in 2016 to a net loss of 105 billion in 2017, which was partially offset by a change in net gain (loss) on available-for-sale financial assets from a net loss of 1 billion in 2016 to a net gain of 193 billion in 2017.

The change in net gain (loss) on financial assets at fair value through profit or loss was principally due to a 96.8% decrease in gain on financial assets held for trading from 186 billion in 2016 to 6 billion in 2017, which was enhanced by 56.3% increase in net loss on financial assets designated at fair value through profit or loss from 71 billion in 2016 to 111 billion in 2017. The 96.8% decrease in gain on financial assets held for trading was primarily due to a change in net gain (loss) on currency derivatives from a net gain of 121 billion in 2016 to a net loss of 155 billion in 2017, which was partially offset by a 235.3% increase in gains on equity derivatives from 34 billion in 2016 to 114 billion in 2017.

The 56.3% increase in net loss on financial assets designated at fair value through profit or loss resulted mainly from a 47.4% increase in net loss on equity-linked securities from 76 billion in 2016 to 112 billion in 2017, which was primarily attributable to an increase in losses on investments in securities linked to certain indices. Such losses were offset in part through derivative transactions and fees and commissions income generated in connection therewith.

The change in net gain (loss) on available-for-sale financial assets was principally due to a more than four-fold increase in gains on transaction of such securities from 48 billion in 2016 to 224 billion in 2017. Such increase mainly reflected an increase in the number of such transactions in 2017 compared to 2016.

Unrealized gains and losses (other than impairment losses) on valuation of available-for-sale financial assets are recorded in our statement of financial position as part of accumulated other comprehensive income, under other equity. In 2017, we recognized a net loss on valuation of available-for-sale financial assets of 84 billion as part of other comprehensive income (loss) net of tax.

For further information regarding our net gain on financial assets, see Notes 36 and 37 of the notes to our consolidated financial statements included elsewhere in this annual report.

General and Administrative Expenses

The following table shows, for the periods indicated, the components of our general and administrative expenses:

	Year ended December 31,			Percentage change	
	2016	2017	2018	2017/2016	2018/2017
	(in billions of Won)			(%)	
Employee benefits	2,125	2,324	2,322	9.4%	(0.1)%
Depreciation and amortization	248	184	217	(25.8)	17.9
Other general and administrative expenses	1,105	1,023	1,085	(7.4)	6.1
General and administrative expenses	3,478	3,531	3,624	1.5%	2.6%

Comparison of 2018 to 2017

Our general and administrative expenses increased 2.6% from 3,531 billion in 2017 to 3,624 billion in 2018, primarily as a result of a 6.1% increase in other general and administrative expenses from 1,023 billion in 2017 to 1,085 billion in 2018, which was enhanced by a 17.9% increase in depreciation and amortization expenses from 184 billion in 2017 to 217 billion in 2018.

The increase in other general and administrative expenses was primarily due to a 12.1% increase in service charges from 199 billion in 2017 to 223 billion in 2018 and a 25.4% increase in computer and IT-related expenses from 71 billion in 2017 to 89 billion in 2018. The increase in service charges was principally due to higher rates charged by service providers as a result of an increase in the national minimum wage under Korean law, while the increase in computer and IT-related expenses resulted mainly from the incurrence of additional expenses relating to an upgrade of our computer systems, which was completed in May 2018.

The 17.9% increase in depreciation and amortization was mainly related to the upgrade of our computer systems during 2018, as discussed above.

Comparison of 2017 to 2016

Our general and administrative expenses increased 1.5% from 3,478 billion in 2016 to 3,531 billion in 2017, primarily as a result of a 9.4% increase in employee benefits from 2,125 billion in 2016 to 2,324 billion in 2017, which was partially offset by a 7.4% decrease in other general and administrative expenses from 1,105 billion in 2016 to 1,023 billion in 2017 and a 25.8% decrease in depreciation and amortization from 248 billion in 2016 to 184 billion in 2017.

The 9.4% increase in employee benefits was principally due to a 67.6% increase in redundancy payments from 179 billion in 2016 to 300 billion in 2017, resulting mainly from the early retirement program we implemented in September 2017. Such increase was enhanced by a 19.9% increase in other short-term employee benefits from 467 billion in 2016 to 560 billion in 2017, which mainly reflected an increase in benefit levels for our employees.

The 7.4% decrease in other general and administrative expenses was mainly due to an 18.8% decrease in service charges from 245 billion in 2016 to 199 billion in 2017, principally reflecting a decrease in the number of our banking branches, and a 32.9% decrease in miscellaneous other expenses from 70 billion in 2016 to 47 billion in 2017.

The 25.8% decrease in depreciation and amortization was also mainly due to the decrease in the number of our banking branches.

For further information regarding our general and administrative expenses, see Note 39-(1) of the notes to our consolidated financial statements included elsewhere in this annual report.

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Other Net Operating Expenses

The following table shows, for the periods indicated, the components of our other net operating expenses:

	Year ended December 31,			Percentage change	
	2016	2017	2018	2017/2016	2018/2017
	(in billions of Won)			(%)	
Other operating income	5,208	3,736	1,389	(28.2)%	(62.8)%
Other operating expenses	(5,575)	(3,768)	(1,783)	(32.4)	(52.7)
Total other net operating expenses	(367)	(31)	(394)	(91.6)%	1,171.0%

Comparison of 2018 to 2017

Our other net operating expenses increased significantly from 31 billion in 2017 to 394 billion in 2018, as a 62.8% decrease in other operating income from 3,736 billion in 2017 to 1,389 billion in 2018 outpaced a 52.7% decrease in other operating expenses from 3,768 billion in 2017 to 1,783 billion in 2018.

Other operating income includes principally gains on transactions of foreign exchange, gains on disposals of loans and receivables (for 2017 under IAS 39), gains related to derivatives, gains on fair value hedged items and miscellaneous other operating income. The 62.8% decrease in other operating income was attributable mainly to a 63.8% decrease in gains on transactions of foreign exchange from 3,391 billion in 2017 to 1,228 billion in 2018. This decrease, which was principally due to lower exchange rate volatility in 2018, was partially offset by a 65.7% decrease in losses on transactions of foreign exchange from 2,887 billion in 2017 to 991 billion in 2018, which is recorded as part of other operating expenses. On a net basis, net gains on transactions of foreign exchange decreased 53.0% from 504 billion in 2017 to 237 billion in 2018. The decrease in gains on transactions of foreign exchange was enhanced by a 100.0% decrease in gains on disposals of loans and receivables from 205 billion in 2017 to nil in 2018, which reflected the change in classification of gains and losses on disposal of loans and receivables to net gain (loss) on disposal of financial assets at amortized costs, which is part of net gain on financial assets, under IFRS 9. We recognized a net gain on disposal of financial assets at amortized cost of 80 billion in 2018.

Other operating expenses include principally losses on transaction of foreign exchange, deposit insurance premiums, contributions to miscellaneous funds, losses on disposals of loans and receivables (for 2017 under IAS 39), losses related to derivatives, losses on fair value hedged items and miscellaneous other operating expenses. The 52.7% decrease in other operating expenses was primarily the result of a 65.7% decrease in losses on transactions of foreign exchange from 2,887 billion in 2017 to 991 billion in 2018, which mainly reflected lower exchange rate volatility in 2018. This decrease was more than offset by a decrease in gains on transaction of foreign exchange, which is recorded as part of other operating income as discussed above.

Comparison of 2017 to 2016

Our other net operating expenses decreased 91.6% from 367 billion in 2016 to 31 billion in 2017, primarily due to a 32.4% decrease in other operating expenses from 5,575 billion in 2016 to 3,768 billion in 2017, which was partially offset by a 28.2% decrease in other operating income from 5,208 billion in 2016 to 3,737 billion in 2017.

The 28.2% decrease in other operating income was attributable mainly to a 29.2% decrease in gains on transaction of foreign exchange from 4,792 billion in 2016 to 3,391 billion in 2017. This decrease, which primarily reflected lower exchange rate volatility in 2017, was more than offset by a greater decrease in loss on transaction of foreign exchange, which is recorded as part of other operating expenses. On a net basis, our net gain on transaction of foreign exchange increased more than five-fold from 86 billion in 2016 to 504 billion in 2017. The decrease in gains on transaction of foreign exchange was enhanced by a 45.5% decrease in gains on fair value hedged items from 99 billion in 2016 to 54 billion in 2017, as well as a 23.2% decrease in other miscellaneous operating income from 112 billion in 2016 to 86 billion in 2017, which was primarily due to a

60.7% decrease in amounts receivable from other creditor financial institutions under the terms of borrower debt restructuring programs from 75 billion in 2016 to 29 billion in 2017.

The 32.4% decrease in other operating expenses was primarily the result of a 38.7% decrease in loss on transaction of foreign exchange from 4,706 billion in 2016 to 2,887 billion in 2017, which mainly reflected lower exchange rate volatility in 2017. This decrease was partially offset by a decrease in gains on transaction of foreign exchange, which is recorded as part of other operating income as discussed above.

For further information regarding our other net operating expense, see Notes 39-(2) and (3) of the notes to our consolidated financial statements included elsewhere in this annual report.

Net Other Non-operating Income (Expenses)

The following table shows, for the periods indicated, the components of our other net non-operating income (expenses):

	Year ended December 31,			Percentage change	
	2016	2017	2018	2017/2016	2018/2017
	(in billions of Won)			(%)	
Other non-operating income	132	84	130	(36.4)%	54.8%
Other non-operating expenses	(133)	(190)	(87)	42.9	(54.2)
Total net other non-operating income (expenses)	(1)	(106)	43	N/M[1]	N/M

[1] N/M = not meaningful.

Comparison of 2018 to 2017

Our net other non-operating income (expenses) changed from net expenses of 106 billion in 2017 to net income of 43 billion in 2018, as a 54.8% increase in other non-operating income from 84 billion in 2017 to 130 billion in 2018 was enhanced by a 54.2% decrease in other non-operating expenses from 190 billion in 2017 to 87 billion in 2018.

Other non-operating income includes principally rental fee income, gain on disposal of investment in joint ventures and associates, gain on disposal of premises and equipment, intangible assets and other assets, reversal of impairment loss on premises and equipment, intangible assets and other assets and miscellaneous other non-operating income. The 54.8% increase in other non-operating income was attributable primarily to gains recognized in 2018 on the disposal of certain investments in joint ventures and associates after improvements in their financial condition.

Other non-operating expenses include principally depreciation on investment properties, interest expenses of refundable deposits, losses on disposal of investment in joint ventures and associates, losses on disposal of premises and equipment, intangible assets and other assets, impairment losses on premises and equipment, intangible assets and other assets, donations and miscellaneous other non-operating expenses. The 54.2% decrease in other non-operating expenses was attributable mainly to a 46.9% decrease in donations from 98 billion in 2017 to 52 billion in 2018, primarily reflecting our donation of issuance fees of dormant cashier s checks for the preceding five years to the Korea Inclusive Finance Agency in 2017 in accordance with the amended Microfinance Support Act, which significantly decreased in 2018. Such decrease was enhanced by a 92.3% decrease in losses on disposal of investment in joint ventures and associates from 39 billion in 2017 to 3 billion in 2018, which was principally due to a decrease in the number of such transactions in 2018 compared to 2017.

Comparison of 2017 to 2016

Our net other non-operating loss increased significantly from 1 billion in 2016 to 106 billion in 2017, as the effect of a 42.9% increase in other non-operating expenses from 133 billion in 2016 190 billion in 2017 was enhanced by a 36.4% decrease in other non-operating income from 132 billion in 2016 to 84 billion in 2017.

The 36.4% decrease in other non-operating income was attributable mainly to a 66.7% decrease in miscellaneous other non-operating income from 96 billion in 2016 to 32 billion in 2017, which was partially offset by a 73.9% increase in gains on disposal of investment in joint ventures and associates from 23 billion in 2016 to 40 billion in 2017. The increase in gains on disposal of investment in joint ventures and associates was primarily attributable to an increase in the number of such transactions in 2017 compared to 2016.

The 42.9% increase in other non-operating expenses was attributable mainly to a 122.7% increase in donations from 44 billion in 2016 to 98 billion in 2017 and a 160.0% increase in losses on disposal of investment in joint ventures and associates from 15 billion in 2016 to 39 billion in 2017, which were partially offset by a 35.6% decrease in miscellaneous other non-operating expenses from 59 billion in 2016 to 38 billion in 2017. The increase in donations mainly reflected our donation of issuance fees of dormant cashier s checks for the preceding five years to the Korea Inclusive Finance Agency, as discussed above. The increase in losses on disposal of investment in joint ventures and associates was primarily attributable to an increase in the number of such transactions in 2017 compared to 2016.

For further information regarding our net other non-operating income (expenses), see Notes 40-(3) and (4) of the notes to our consolidated financial statements included elsewhere in this annual report.

Share of Gain (Loss) on Joint Ventures and Associates

Comparison of 2018 to 2017

Our share of gain (loss) on joint ventures and associates changed from a loss of 102 billion in 2017 to a gain of 3 billion in 2018. Such change was primarily due to a significant decrease in impairment losses from 115 billion in 2017 to less than 1 billion in 2018, resulting mainly from a 103 billion impairment loss we recorded in 2017 in respect of our 14.2% equity interest in Kumho Tire Co., Inc. (which we had acquired in 2010 as a result of a debt-to-equity swap in connection with its workout), due to further deterioration in its financial condition in 2017, which was not repeated in 2018. We no longer hold an equity interest in Kumho Tire Co., Inc. as a result of our loss of significant influence over the entity due to termination of the joint management procedures of the creditor financial institutions in 2018.

Comparison of 2017 to 2016

Our share of losses of joint ventures and associates increased more than five-fold from 20 billion in 2016 to 101 billion in 2017. Such increase was primarily attributable to a significant increase in impairment losses from 1 billion in 2016 to 115 billion in 2017, which mainly reflected a 103 billion impairment loss we recorded in respect of our 14.2% equity interest in Kumho Tire Co., Inc., as discussed above.

For further information regarding our investments in joint ventures and associates, see Note 13 of the notes to our consolidated financial statements included elsewhere in this annual report.

Income Tax Expense

Our income tax expense is calculated by adding or subtracting changes in deferred income tax liabilities and assets to income tax amounts payable for the period. Deferred tax assets are recognized for deductible temporary differences, including operating losses and tax credit carry-forwards, while deferred tax liabilities are recognized for taxable temporary differences. Temporary differences are those between the carrying values of assets and liabilities for financial reporting purposes and their tax bases. Deferred tax assets, including the carry-forwards of unused tax losses, are recognized to the extent it is probable that the deferred tax assets will be realized.

Comparison of 2018 to 2017

Income tax expense increased 79.7% from 419 billion in 2017 to 753 billion in 2018, mainly as a result of an increase in our net income before income tax expense, as well as an increase in the applicable corporate income tax rate in Korea, inclusive of local income surtax, from 24.2% in 2017 to 27.5% in 2018. Our effective tax rate was 21.5% in 2017 and 26.9% in 2018.

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Comparison of 2017 to 2016

Income tax expense increased 51.8% from 276 billion in 2016 to 419 billion in 2017, mainly as a result of an increase in our net income before income tax expense, the effect of which was enhanced by decreases in non-exempt income and tax adjustments recognized in respect of prior periods. The statutory tax rate was 24.2% for pre-tax income over 20 billion in 2016 and 2017. Our effective tax rate was 17.8% in 2016 and 21.5% in 2017.

For further information regarding our income tax expense, see Note 41 of the notes to our consolidated financial statements included elsewhere in this annual report.

Net Income

Due to the factors described above, we recorded net income of 2,052 billion in 2018, compared to 1,530 billion in 2017 and 1,277 billion in 2016.

Results by Principal Business Segment

We compile and analyze financial information for our business segments based upon segment information used by our management for the purposes of resource allocation and performance evaluation. We currently have six operational business segments: consumer banking, corporate banking, investment banking, capital markets, credit card and other operations.

The following table shows, for the periods indicated, our results of operations by segment:

	Net income Year ended December 31,			**Total operating income[1] Year ended December 31,**		
	2016	**2017**	**2018**	**2016**	**2017**	**2018**
	(in billions of Won)					
Consumer banking	99	264	383	166	446	548
Corporate banking	610	918	1,201	815	1,217	1,646
Investment banking	84	106	178	65	100	213
Capital markets	(3)	92	40	1	122	56
Credit card	109	101	115	144	138	157
Other operations	514	23	172	441	73	156
Total[2]	1,413	1,503	2,089	1,632	2,096	2,776

(1) Comprises net interest income and net non-interest income after administrative expenses and impairment losses due to credit losses.

(2) Before adjustments for inter-segment transactions (other than inter-segment loans and borrowings) and certain differences in classification under our management reporting system.

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Consumer Banking

This segment consists of our consumer banking operations. The following table shows, for the periods indicated, our income statement data for this segment:

	Year ended December 31,			Percentage change	
	2016	2017	2018	2017/2016	2018/2017
	(in billions of Won)			(%)	
Income statement data					
Interest income	2,980	3,150	3,530	5.7%	12.1%
Interest expense	(1,024)	(956)	(1,022)	(6.6)	6.9
Inter-segment	(472)	(491)	(634)	4.0	29.1
Net interest income	1,484	1,703	1,874	14.8	10.0
Non-interest income	924	802	678	(13.2)	(15.5)
Non-interest expense	(406)	(254)	(144)	(37.4)	(43.3)
Inter-segment	39	102	133	161.5	30.4
Net non-interest income	557	650	667	16.7	2.6
Administrative expenses	(1,788)	(1,809)	(1,866)	1.2	3.2
Impairment losses due to credit loss and others[(1)]	(87)	(98)	(127)	12.6	29.6
Total other expenses	(1,875)	(1,907)	(1,993)	1.7	4.5
Operating income	166	446	548	168.7	22.9
Net non-operating loss	(35)	(98)	(20)	180.0	(79.8)
Net income before tax	131	348	528	165.6	51.7
Income tax expense	(32)	(84)	(145)	162.5	72.6
Net income	99	264	383	166.7%	45.1%

(1) Consist of reversal of allowance for (impairment losses due to) credit loss, gain (loss) on loan sales and reversal of provisions (provisions).

Comparison of 2018 to 2017

Our net income before tax for this segment increased 51.8% from 348 billion in 2017 to 528 billion in 2018. Net income after tax also increased 45.1% from 264 billion in 2017 to 383 billion in 2018.

Interest income for this segment increased 12.1% from 3,150 billion in 2017 to 3,530 billion in 2018, primarily due to an increase in the average yields on general purpose household loans (including home equity loans) and mortgage loans, mainly reflecting the increase in the general level of interest rates in Korea in 2018 compared to 2017, which was enhanced by an increase in the average balances of such loans, principally as a result of increased demand for such loans among consumers.

Interest expense attributable to this segment increased 6.9% from 956 billion in 2017 to 1,022 billion in 2018. The increase in interest expense was primarily due to an increase in the average cost of time and savings deposits held by consumers, mainly as a result of the increase in the general level of interest rates in Korea in 2018 compared to 2017, which was enhanced by an increase in the average balance of such deposits, principally due to increased demand for such deposits among consumers.

Net interest expense from inter-segment transactions for this segment increased 29.1% from 491 billion in 2017 to 634 billion in 2018, principally as a result of increased funding needs for this segment in light of the increase in the average volume of mortgage loans and general purpose household loans (including home equity loans).

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Impairment losses due to credit loss and others for this segment increased 29.6% from 98 billion in 2017 to 127 billion in 2018, primarily as a result of an increase in provisions for general purpose household loans (including home equity loans), which was mainly due to an overall increase in the outstanding balance of such loans.

Non-interest income attributable to this segment decreased 15.5% from 802 billion in 2017 to 678 billion in 2018, primarily due to a decrease in gains on transaction of foreign exchange.

Non-interest expense for this segment decreased 43.3% from 254 billion in 2017 to 144 billion in 2018, primarily as a result of a decrease in losses on transaction of foreign exchange.

Net non-interest income from inter-segment transactions for this segment increased 30.4% from 102 billion in 2017 to 133 billion in 2018, principally as a result of an increase in fee income from our asset management products, including mutual funds and money trust products.

Administrative expenses attributable to this segment increased 3.2% from 1,809 billion in 2017 to 1,866 billion in 2018, mainly due to increases in service charges and salaries paid to our employees in this segment.

Comparison of 2017 to 2016

Our net income before tax for this segment increased 165.6% from 131 billion in 2016 to 348 billion in 2017. Net income after tax also increased 166.7% from 99 billion in 2016 to 264 billion in 2017.

Interest income for this segment increased 5.7% from 2,980 billion in 2016 to 3,150 billion in 2017, primarily due to an increase in the average balances of general purpose household loans (including home equity loans) and mortgage loans, mainly reflecting increased demand for such loans among consumers, which was enhanced by a slight increase in the average yields on such loans, principally as a result of an increase in interest rates for loans in Korea commencing in the second half of 2017.

Interest expense attributable to this segment decreased 6.6% from 1,024 billion in 2016 to 956 billion in 2017. The decrease in interest expense was primarily due to a decrease in the average cost of time and savings deposits held by consumers, which was mainly attributable to the decrease in the general level of interest rates in Korea in 2017 compared to 2016.

Net interest expense from inter-segment transactions for this segment increased 4.0% from 472 billion in 2016 to 491 billion in 2017, principally as a result of increased funding needs for this segment in light of the increase in the average volumes of general purpose household loans (including home equity loans) and mortgage loans.

Impairment losses due to credit loss and others for this segment increased 12.6% from 87 billion in 2016 to 98 billion in 2017, primarily as a result of an increase in provisions for general purpose household loans (including home equity loans) and mortgage loans, mainly reflecting the increase in the outstanding balances of such loans.

Non-interest income attributable to this segment decreased 13.2% from 924 billion in 2016 to 802 billion in 2017, primarily due to a decrease in gains on transaction of foreign exchange.

Non-interest expense for this segment decreased 37.4% from 406 billion in 2016 to 254 billion in 2017, primarily as a result of a decrease in losses on transaction of foreign exchange.

Net non-interest income from inter-segment transactions for this segment increased 161.5% from 39 billion in 2016 to 102 billion in 2017, principally as a result of an increase in fee income from our asset management products, including mutual funds, money trust products and bancassurance products.

Administrative expenses attributable to this segment increased 1.2% from 1,788 billion in 2016 to 1,809 billion in 2017, primarily due to an increase in benefit levels for our employees in this segment.

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Corporate Banking

This segment consists of our corporate banking (including small- and medium-sized enterprise banking and large corporate banking) operations. The following table shows, for the periods indicated, our income statement data for this segment:

	Year ended December 31,			Percentage change	
	2016	**2017**	**2018**	**2017/2016**	**2018/2017**
	(in billions of Won)			(%)	
Income statement data					
Interest income	3,026	2,965	3,410	(2.0)%	15.0%
Interest expense	(1,781)	(1,682)	(2,168)	(5.6)	28.9
Inter-segment	496	512	833	3.2	62.7
Net interest income	1,741	1,795	2,075	3.1	15.6
Non-interest income	535	681	721	27.3	5.9
Non-interest expense	(33)	(170)	(290)	415.2	70.6
Inter-segment	48	60	70	25.0	16.7
Net non-interest income	550	571	501	3.8	(12.3)
Administrative expenses	(967)	(832)	(869)	(14.0)	4.4
Impairment losses due to credit loss and others[1]	(509)	(317)	(61)	(37.7)	(80.8)
Total other expenses	(1,476)	(1,149)	(930)	(22.2)	(19.1)
Operating income	815	1,217	1,646	49.3	35.3
Net non-operating income (loss)	(1)	(3)	1	200.0	N/M[2]
Net income before tax	814	1,214	1,647	49.1	35.7
Income tax expense	(204)	(296)	(446)	45.1	50.7
Net income	610	918	1,201	50.5%	30.8%

(1) Consist of reversal of allowance for (impairment losses due to) credit loss, gain (loss) on loan sales and reversal of provisions (provisions).

(2) N/M = not meaningful.

Comparison of 2018 to 2017

Our net income before tax for this segment increased 35.7% from 1,214 billion in 2017 to 1,647 billion in 2018. Net income after tax also increased 30.8% from 918 billion in 2017 to 1,201 billion in 2018.

Interest income for this segment increased 15.0% from 2,965 billion in 2017 to 3,410 billion in 2018, primarily due to an increase in the average balances of commercial and industrial and other commercial loans, mainly reflecting increased demand from corporate borrowers in anticipation of further increases in the general level of interest rates in Korea, as well as our efforts to increase our lending to small and medium-sized enterprises. Such increase was enhanced by an increase in the average yields on such loans as well as trade financing loans, which mainly reflected the increase in the general level of interest rates in Korea in 2018 compared to 2017.

Interest expense attributable to this segment, which consists mainly of interest expense on corporate deposits, borrowings and debentures, increased 28.9% from 1,682 billion in 2017 to 2,168 billion in 2018. The increase in interest expense was primarily due to an increase in the average cost of time and savings deposits held by corporate customers, which was mainly attributable to the increase in the general level of interest rates in Korea in 2018 compared to 2017. Such increase was enhanced by an increase in the average balance of such deposits.

Net interest income from inter-segment transactions for this segment increased 62.7% from 512 billion in 2017 to 833 billion in 2018, principally as a result of an increase in the average yield on loans to other segments, which mainly reflected the increase in the general level of interest rates in Korea in 2018 compared to 2017.

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Impairment losses due to credit loss and others for this segment decreased 80.8% from 317 billion in 2017 to 61 billion in 2018, primarily as a result of improvements in the overall asset quality of our corporate loan portfolio and the credit ratings of certain corporate borrowers.

Non-interest income attributable to this segment increased 5.9% from 681 billion in 2017 to 721 billion in 2018, primarily due to an increase in gains on transaction of derivatives, which was more than offset by an increase in losses on transaction of derivatives, contributing to a decrease in net non-interest income in this segment.

Non-interest expense for this segment increased 70.6% from 170 billion in 2017 to 290 billion in 2018, primarily as a result of an increase in losses on transaction of derivatives, which more than offset the increase in gains on transaction of derivatives, as discussed above.

Administrative expenses attributable to this segment increased 4.4% from 832 billion in 2017 to 869 billion in 2018, mainly due to increases in service charges and salaries paid to our employees in this segment.

Comparison of 2017 to 2016

Our net income before tax for this segment increased 49.1% from 814 billion in 2016 to 1,214 billion in 2017. Net income after tax also increased 50.5% from 610 billion in 2016 to 918 billion in 2017.

Interest income for this segment decreased 2.0% from 3,026 billion in 2016 to 2,965 billion in 2017, primarily due to a decrease in the average balances of commercial and industrial and other commercial loans, mainly reflecting a decrease in loans to certain large corporate borrowers, principally as a result of our efforts to decrease our exposure to such borrowers and diversify our loan portfolio, which was partially offset by a slight increase in the average yields on such loans.

Interest expense attributable to this segment decreased 5.6% from 1,781 billion in 2016 to 1,682 billion in 2017. The decrease in interest expense was primarily due to a decrease in the average cost of time and savings deposits held by corporate customers, mainly attributable to the decrease in the general level of interest rates in Korea in 2017 compared to 2016.

Net interest income from inter-segment transactions for this segment increased 3.2% from 496 billion in 2016 to 512 billion in 2017, principally as a result of an increase in the average balance of loans to other segments, which mainly reflected increased funding needs of the consumer banking segment.

Impairment losses due to credit loss and others for this segment decreased 37.7% from 509 billion in 2016 to 317 billion in 2017, primarily as a result of a decrease in provisions for corporate loans, mainly reflecting an overall improvement in the asset quality of our corporate loan portfolio.

Non-interest income attributable to this segment increased 27.3% from 535 billion in 2016 to 681 billion in 2017, primarily due to an increase in gains on transaction of derivatives.

Non-interest expense for this segment increased more than five-fold from 33 billion in 2016 to 170 billion in 2017, primarily as a result of an increase in losses on transaction of derivatives.

Administrative expenses attributable to this segment decreased 14.0% from 967 billion in 2016 to 832 billion in 2017, primarily due to increased efficiency from the consolidation of corporate banking branches with consumer banking branches, which was reflected in this segment.

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Investment Banking

This segment consists of our investment banking operations, including principally project finance, structured finance, merger and acquisition financing and financial advisory services. The following table shows, for the periods indicated, our income statement data for this segment:

	Year ended December 31,			Percentage change	
	2016	**2017**	**2018**	**2017/2016**	**2018/2017**
	(in billions of Won)			(%)	
Income statement data					
Interest income	153	148	152	(3.3)%	2.7%
Interest expense					
Inter-segment	(138)	(136)	(164)	(1.4)	20.6
Net interest income	15	12	(12)	(20.0)	N/M[2]
Non-interest income	605	367	230	(39.3)	(37.3)
Non-interest expense	(444)	(215)	(54)	(51.6)	(74.9)
Inter-segment					
Net non-interest income	161	152	177	(5.6)	16.4
Administrative expenses	(15)	(13)	(14)	(13.3)	7.7
Reversal of allowance for (impairment losses due to) credit loss and others[1]	(96)	(51)	62	(46.9)	N/M
Total other income (expenses)	(111)	(64)	48	(42.3)	N/M
Operating income	65	100	213	53.8	113.0
Net non-operating income	46	39	33	(15.2)	(15.4)
Net income before tax	111	139	246	25.2	77.0
Income tax expense	(27)	(33)	(68)	22.2	106.1
Net income	84	106	178	26.2%	67.9%

(1) Consists of reversal of allowance for (impairment losses due to) credit loss, gain (loss) on loan sales and reversal of provisions (provisions).

(2) N/M = not meaningful.

Comparison of 2018 to 2017

Our net income before tax for this segment increased 77.0% from 139 billion in 2017 to 246 billion in 2018. Net income after tax also increased 67.9% from 106 billion in 2017 to 178 billion in 2018.

Interest income for this segment, which consists mainly of interest income from financing provided to corporations, increased 2.7% from 148 billion in 2017 to 152 billion in 2018, primarily reflecting an increase in the average balance of such financing provided to corporate customers.

Net interest expense on inter-segment transactions for this segment increased 20.6% from 136 billion in 2017 to 164 billion in 2018, principally as a result of an increase in the average cost of borrowings from other segments, which mainly reflected the increase in the general level of interest rates in Korea in 2018 compared to 2017.

Reversal of allowance for (impairment losses due to) credit loss and others for this segment changed from a net loss of 51 billion in 2017 to a net reversal of 62 billion in 2018, primarily as a result of improvements in the overall asset quality of our financing portfolio and the credit ratings of certain corporate borrowers.

Non-interest income attributable to this segment decreased 37.3% from 367 billion in 2017 to 230 billion in 2018, primarily due to decreases in gains on transaction of foreign exchange and on securities classified as financial assets at fair value through other comprehensive income.

Non-interest expense for this segment decreased 74.9% from 215 billion in 2017 to 54 billion in 2018, primarily as a result of a decrease in losses on transaction of foreign exchange.

Administrative expenses attributable to this segment increased 7.7% from 13 billion in 2017 to 14 billion in 2018.

Comparison of 2017 to 2016

Our net income before tax for this segment increased 25.2% from 111 billion in 2016 to 139 billion in 2017. Net income after tax also increased 26.2% from 84 billion in 2016 to 106 billion in 2017.

Interest income for this segment, which consists mainly of interest income from financing provided to corporations, decreased 3.3% from 153 billion in 2016 to 148 billion in 2017, primarily reflecting the decrease in the general level of interest rates in Korea in 2017 compared to 2016.

Net interest expense on inter-segment transactions for this segment decreased 1.4% from 138 billion in 2016 to 136 billion in 2017, principally as a result of a decrease in the average cost of borrowings from other segments, which mainly reflected the lower interest rate environment in Korea.

Impairment losses due to credit loss and others for this segment decreased 46.9% from 96 billion in 2016 to 51 billion in 2017, primarily as a result of an improvement in the overall asset quality of our financing portfolio.

Non-interest income attributable to this segment decreased 39.3% from 605 billion in 2016 to 367 billion in 2017, primarily due to a decrease in gains on transaction of foreign exchange.

Non-interest expense for this segment decreased 51.6% from 444 billion in 2016 to 215 billion in 2017, primarily as a result of a decrease in losses on transaction of foreign exchange.

Administrative expenses attributable to this segment decreased 13.3% from 15 billion in 2016 to 13 billion in 2017, primarily due to increased efficiency in the use of our sales channels.

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Capital Markets

This segment consists of our core capital markets operations, including principally securities investment and trading of securities, foreign exchange and derivatives. The following table shows, for the periods indicated, our income statement data for this segment:

	Year ended December 31,			Percentage change	
	2016	2017	2018	2017/2016	2018/2017
	(in billions of Won)			(%)	
Income statement data					
Interest income	19	19	9	%	(52.6)%
Interest expense					
Inter-segment	30	18	26	(40.0)	44.4
Net interest income	49	37	35	(24.5)	(5.4)
Non-interest income	7,590	9,548	7,021	25.8	(26.5)
Non-interest expense	(7,586)	(9,478)	(6,965)	24.9	(26.5)
Inter-segment					
Net non-interest income	4	70	56	1,650.0	(20.0)
Administrative expenses	(18)	(16)	(18)	(11.1)	12.5
Reversal of allowance for (impairment losses due to) credit loss and others[1]	(34)	31	(17)	N/M[2]	N/M
Total other income (expenses)	(52)	15	(35)	(128.8)	N/M
Operating income	1	122	56	N/M	(54.1)
Net non-operating loss	(5)			N/M	
Net income (loss) before tax	(4)	122	56	N/M	(54.1)
Income tax benefit (expense)	1	(30)	(16)	N/M	(46.7)
Net income (loss)	(3)	92	40	N/M	(56.5)

(1) Consists of reversal of allowance for (impairment losses due to) credit loss, gain (loss) on loan sales and reversal of provisions (provisions).

(2) N/M = not meaningful.

Comparison of 2018 to 2017

Our net income before tax for this segment decreased 54.1% from 122 billion in 2017 to 56 billion in 2018. Net income after tax also decreased 56.5% from 92 billion in 2017 to 40 billion in 2018.

Interest income for this segment, which consists mainly of interest income from securities held for trading purposes, decreased 52.6% from 19 billion in 2017 to 9 billion in 2018, primarily due to a decrease in the average yield on such securities.

Net interest income on inter-segment transactions for this segment increased 44.4% from 18 billion in 2017 to 26 billion in 2018, principally as a result of an increase in the average yield on loans to other segments, which mainly reflected the increase in the general level of interest rates in Korea in 2018 compared to 2017.

Reversal of allowance for (impairment losses due to) credit loss and others for this segment changed from a net reversal of 31 billion in 2017 to a net loss of 17 billion in 2018, primarily as a result of a significant reversal of allowance in 2017 relating to a downward adjustment in the valuation of the derivative products of a corporate customer, which was not repeated in 2018.

Non-interest income attributable to this segment decreased 26.5% from 9,548 billion in 2017 to 7,021 billion in 2018, primarily due to a decrease in gains on transaction of foreign exchange.

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Non-interest expense for this segment decreased 26.5% from 9,478 billion in 2017 to 6,965 billion in 2018, primarily as a result of a decrease in losses on transaction of foreign exchange.

Administrative expenses attributable to this segment increased 12.5% from 16 billion in 2017 to 18 billion in 2018, primarily due to an increase in service charges resulting from higher rates charged by service providers as a result of an increase in the national minimum wage under Korean law.

Comparison of 2017 to 2016

Our net income (loss) before tax for this segment changed from a net loss of 4 billion in 2016 to a net gain of 122 billion in 2017. Net income (loss) after tax also changed from a net loss of 3 billion in 2016 to a net gain of 92 billion in 2017.

Interest income for this segment, which consists mainly of interest income from securities held for trading purposes, remained stable at 19 billion in 2016 and 2017.

Net interest income on inter-segment transactions for this segment decreased 40.0% from 30 billion in 2016 to 18 billion in 2017, principally as a result of a decrease in the average balance of loans to other segments.

Impairment losses due to credit loss and others for this segment changed from net loss of 34 billion in 2016 to a net reversal of 31 billion in 2017, primarily as a result of a significant reversal of allowance relating to a downward adjustment in the valuation of the derivative products of a corporate customer.

Non-interest income attributable to this segment increased 25.8% from 7,590 billion in 2016 to 9,548 billion in 2017, primarily due to an increase in gains on transaction of foreign exchange.

Non-interest expense for this segment increased 24.9% from 7,586 billion in 2016 to 9,478 billion in 2017, primarily as a result of an increase in losses on transaction of foreign exchange.

Administrative expenses attributable to this segment decreased 11.1% from 18 billion in 2016 to 16 billion in 2017, primarily due to decreases in salaries and benefits paid, attributable mainly to a reduction in the number of employees in this segment.

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Credit Card

This segment consists of our credit card operations. The following table shows, for the periods indicated, our income statement data for this segment:

	Year ended December 31,			Percentage change	
	2016	2017	2018	2017/2016	2018/2017
	(in billions of Won)			(%)	
Income statement data					
Interest income	557	600	670	7.7%	11.7%
Interest expense	(129)	(136)	(161)	5.4	18.4
Inter-segment					
Net interest income	428	464	509	8.4	9.7
Non-interest income	986	1,164	666	18.1	(42.8)
Non-interest expense	(906)	(1,090)	(621)	20.3	(43.0)
Inter-segment					
Net non-interest expense	80	74	45	(7.5)	(39.2)
Administrative expenses	(148)	(165)	(171)	11.5	3.6
Impairment losses due to credit loss and others[1]	(216)	(235)	(227)	8.8	(3.4)
Total other expenses	(364)	(400)	(398)	9.9	(0.5)
Operating income	144	138	156	(4.2)	13.0
Net non-operating loss	(2)	(5)	(5)	150.0	
Net income before tax	142	133	151	(6.3)	13.5
Income tax expense	(33)	(32)	(36)	(3.0)	12.5
Net income	109	101	115	(7.3)%	13.9%

(1) Consist of reversal of allowance for (impairment losses due to) credit loss, gain (loss) on loan sales and reversal of provisions (provisions).

Comparison of 2018 to 2017

Our net income before tax for this segment increased 13.5% from 133 billion in 2017 to 151 billion in 2018. Net income after tax also increased 13.9% from 101 billion in 2017 to 115 billion in 2018.

Interest income for this segment increased 11.7% from 600 billion in 2017 to 670 billion in 2018, primarily due to an increase in the average balance of credit card receivables, mainly reflecting an increase in the volume of credit card transactions, including cash advances and credit card loans, which was offset in part by a decrease in the average yield on such receivables.

Interest expense attributable to this segment increased 18.4% from 136 billion in 2017 to 161 billion in 2018, primarily due to increased funding needs for this segment in light of the increase in the average balance of credit card receivables, including cash advances and credit card loans.

Impairment losses due to credit loss and others for this segment decreased 3.4% from 235 billion in 2017 to 227 billion in 2018, primarily as a result of an increase in the outstanding balance of our credit card receivables.

Non-interest income attributable to this segment decreased 42.8% from 1,164 billion in 2017 to 666 billion in 2018, primarily due to a decrease in credit card fees, including merchant processing fees and holder annual fees, which was attributable mainly to our adoption of IFRS 15 in 2018. See Results of Operations Net Fees and Commissions Income Comparison of 2018 to 2017.

Non-interest expense for this segment decreased 43.0% from 1,090 billion in 2017 to 621 billion in 2018, primarily as a result of a decrease in credit card commissions, which was attributable mainly to our adoption of IFRS 15 in 2018. See Results of Operations Net Fees and Commissions Income Comparison of 2018 to 2017.

Administrative expenses attributable to this segment increased 3.6% from 165 billion in 2017 to 171 billion in 2018, primarily due to an increase in salaries paid to our employees in this segment, principally reflecting an increase in the number of such employees, as well as increases in advertising expenses relating to new products and depreciation expenses relating to IT facilities.

Comparison of 2017 to 2016

Our net income before tax for this segment decreased 6.3% from 142 billion in 2016 to 133 billion in 2017. Net income after tax also decreased 7.3% from 109 billion in 2016 to 101 billion in 2017.

Interest income for this segment increased 7.7% from 557 billion in 2016 to 600 billion in 2017, primarily due to an increase in the average balance of credit card receivables, mainly reflecting an increase in the volume of credit card transactions as well as an increase in credit card issuances, which was offset in part by a decrease in the average yield on such receivables.

Interest expense attributable to this segment increased 5.4% from 129 billion in 2016 to 136 billion in 2017, primarily due to increased funding needs for this segment in light of the increase in the average balance of credit card receivables.

Impairment losses due to credit loss and others for this segment increased 8.8% from 216 billion in 2016 to 235 billion in 2017, primarily as a result of an increase in provisions for credit losses, mainly due to a deterioration in the overall asset quality of our credit card receivables.

Non-interest income attributable to this segment increased 18.1% from 986 billion in 2016 to 1,164 billion in 2017, primarily due to an increase in credit card fees, mainly reflecting the increase in the average balance of credit card receivables.

Non-interest expense for this segment increased 20.3% from 906 billion in 2016 to 1,090 billion in 2017, primarily as a result of an increase in credit card commissions, mainly reflecting the increase in the average balance of credit card receivables.

Administrative expenses attributable to this segment increased 11.5% from 148 billion in 2016 to 165 billion in 2017, primarily due to an increase in salaries paid to our employees in this segment.

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Other Operations

Other operations include all of our operations not included in the other segments, including principally the operations of our Credit Management and Collection Department and our Corporate Restoration Department, our treasury operations involving transactions of securities at fair value through other comprehensive income and financing among financial institutions as well as the operations of all of our subsidiaries other than Woori Card. The following table shows, for the periods indicated, our income statement data for this segment:

	Year ended December 31,			Percentage change	
	2016	2017	2018	2017/2016	2018/2017
	(in billions of Won)			(%)	
Income statement data					
Interest income	1,492	1,361	1,606	(8.8)%	18.0%
Interest expense	(864)	(835)	(984)	(3.4)	17.8
Inter-segment	85	97	(61)	14.1	N/M[2]
Net interest income	713	623	561	(12.6)	(10.0)
Non-interest income	4,563	2,683	1,214	(41.2)	(54.8)
Non-interest expense	(4,173)	(2,132)	(551)	(48.9)	(74.2)
Inter-segment	(87)	(162)	(202)	86.2	24.7
Net non-interest income	303	389	461	28.4	18.5
Administrative expenses	(794)	(954)	(968)	20.2	1.5
Reversal of allowance for credit loss and others[1]	219	15	103	(93.2)	586.7
Total other expenses	(575)	(939)	(865)	63.3	(7.9)
Operating income	441	73	156	(83.4)	113.7
Net non-operating income (loss)	56	(113)	57	N/M	N/M
Net income (loss) before tax	497	(40)	213	N/M	N/M
Income tax benefit (expense)	17	63	(41)	270.6	N/M
Net income	514	23	172	(95.7)%	647.8%

(1) Consists of reversal of allowance for (impairment losses due to) credit loss, gain (loss) on loan sales and reversal of provisions (provisions).

(2) N/M = not meaningful.

Comparison of 2018 to 2017

Our net income (loss) before tax for this segment changed from a net loss of 40 billion in 2017 to a net gain of 213 billion in 2018. Net income after tax increased more than seven-fold from 23 billion in 2017 to 172 billion in 2018.

Interest income for this segment, which mainly includes interest income due from banks and on certain other loans and financial assets, increased 18.0% from 1,361 billion in 2017 to 1,606 billion in 2018, primarily due to the increase in the general level of interest rates in Korea in 2018 compared to 2017.

Interest expense attributable to this segment, which mainly includes interest expense on debentures, borrowings, call money and deposits due to customers, increased 17.8% from 835 billion in 2017 to 984 billion in 2018, primarily due to increased funding costs for this segment in light of the higher interest rate environment in Korea in 2018.

Net interest income (expense) from inter-segment transactions for this segment changed from net income of 97 billion in 2017 to a net expense of 61 billion in 2018, principally as a result of increased funding needs of this segment compared to other segments.

Reversal of allowance for credit loss and others for this segment increased more than six-fold from 15 billion in 2017 to 103 billion in 2018, primarily as a result of a decrease in provisions for credit losses of our Corporate Restoration Department, mainly reflecting the improvement in the financial condition of certain companies, the securities of which were held by such department.

Non-interest income attributable to this segment, which mainly includes gains on transaction of foreign exchange, gains on fair value hedged items and gains on transactions of derivatives, decreased 54.8% from 2,683 billion in 2017 to 1,214 billion in 2018, primarily due to decreases in such gains relating to our treasury operations.

Non-interest expense for this segment, which mainly includes losses on transaction of foreign exchange, losses on fair value hedged items and losses on transactions of derivatives, decreased 74.2% from 2,132 billion in 2017 to 551 billion in 2018, primarily as a result of decreases in such losses relating to our treasury operations.

Administrative expenses attributable to this segment increased 1.5% from 954 billion in 2017 to 968 billion in 2018, primarily due to an increase in computer and IT-related expenses relating to an upgrade of our computer systems, which was completed in May 2018.

Comparison of 2017 to 2016

Our net income (loss) before tax for this segment changed from net income of 497 billion in 2016 to a net loss of 40 billion in 2017. Net income after tax decreased 95.7% from 514 billion in 2016 to 23 billion in 2017.

Interest income for this segment, which mainly includes interest income due from banks and on certain other loans and financial assets, decreased 8.8% from 1,492 billion in 2016 to 1,361 billion in 2017, primarily due to the decrease in the general level of interest rates in Korea in 2017 compared to 2016.

Interest expense attributable to this segment, which mainly includes interest expense on debentures, borrowings, call money and deposits due to customers, decreased 3.4% from 864 billion in 2016 to 835 billion in 2017, primarily due to decreased funding costs for this segment in light of the lower interest rate environment in Korea in 2017.

Net interest income from inter-segment transactions for this segment increased 14.1% from 85 billion in 2016 to 97 billion in 2017, principally as a result of an increase in the average balance of loans to other segments.

Reversal of allowance for credit loss and others for this segment decreased from 93.2% from 219 billion in 2016 to 15 billion in 2017, primarily as a result of an increase in provisions for credit losses of our Corporate Restoration Department, mainly reflecting the deterioration of the financial condition of certain companies, the securities of which were held by such department.

Non-interest income attributable to this segment, which mainly includes gains on transaction of foreign exchange, gains on fair value hedged items and gains on transactions of derivatives, decreased 41.2% from 4,563 billion in 2016 to 2,683 billion in 2017, primarily due a decrease in gains on transactions of foreign exchange, mainly reflecting lower exchange rate volatility in 2017.

Non-interest expense for this segment, which mainly includes losses on transaction of foreign exchange, losses on fair value hedged items and losses on transactions of derivatives, decreased 48.9% from 4,173 billion in 2016 to 2,132 billion in 2017, primarily as a result of a decrease in losses on transactions of foreign exchange, mainly reflecting lower exchange rate volatility in 2017.

Administrative expenses attributable to this segment increased 20.2% from 794 billion in 2016 to 954 billion in 2017, primarily due to an increase in redundancy payments, which are recorded in this segment, resulting mainly from our implementation of an early retirement program in September 2017.

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Item 5.B. *Liquidity and Capital Resources*
Financial Condition

Assets

The following table sets forth, as of the dates indicated, the principal components of our assets:

	As of December 31,			Percentage change	
	2016	2017	2018	2017/2016	2018/2017
	(in billions of Won)			(%)	
Cash and cash equivalents	7,591	6,908	6,748	(9.0)%	(2.3)%
Financial assets at fair value through profit or loss (IFRS 9)			6,126	N/A[(1)]	N/A
Financial assets at fair value through profit or loss (IAS 39)	5,651	5,843		3.4	N/A
Financial assets at fair value through other comprehensive income			18,063	N/A	N/A
Available-for-sale financial assets	20,818	15,353		(26.3)	N/A
Securities at amortized cost			22,933	N/A	N/A
Held-to-maturity financial assets	13,910	16,749		20.4	N/A
Loans and other financial assets at amortized cost:			282,458	N/A	N/A
Loans and receivables:	258,393	267,106		3.4	N/A
Due from banks[(2)]	14,821	8,868	14,151	(40.1)	59.6
Loans[(2)]	235,401	251,523	260,820	6.8	3.7
Loans in local currency	191,309	200,213	210,701	4.7	5.2
Loans in foreign currencies	14,102	13,148	15,239	(6.8)	15.9
Domestic banker s letter of credit	3,754	2,517	2,934	(33.0)	16.6
Credit card accounts	6,674	6,827	8,051	2.3	17.9
Bills bought in foreign currencies	7,759	8,197	7,874	5.6	(3.9)
Bills bought in local currency	414	335	23	(19.1)	(93.1)
Factoring receivables	97	138	46	42.3	(66.7)
Advances for customers on guarantees	25	24	14	(4.0)	(41.7)
Privately placed bonds	328	362	366	10.4	1.1
Securitized loans	253	563	1,377	122.5	144.6
Call loans	2,985	3,003	2,669	0.6	(11.1)
Bonds purchased under resale agreements	8,855	16,859	11,702	90.4	(30.6)
Loan origination costs and fees	251	511	574	103.6	12.3
Others	459	607	1,037	32.2	70.8
Discounted present value	(14)	(11)	(10)	(21.4)	(9.1)
Loss allowance	(1,851)	(1,770)	(1,778)	(4.4)	0.5
Other financial assets (other receivables)[(2)]	8,177	6,715	7,487	(17.9)	11.5
Investments in joint ventures and associates	439	417	362	(5.0)	(13.2)
Investment properties	358	371	378	3.6	1.9
Premises and equipment	2,458	2,478	2,450	0.8	(1.1)

Other assets[3]	1,065	1,070	929	0.5	(13.2)
Total assets	310,683	316,295	340,447	1.8%	7.6%

(1) N/A = not applicable.
(2) Net of allowance for credit losses.
(3) Includes intangible assets and goodwill, assets held for sale, current tax assets, deferred tax assets, derivative assets and other assets.

For further information on our assets, see Item 4.B. Business Overview Assets and Liabilities.

Comparison of 2018 to 2017

Our total assets increased 7.6% from 316,295 billion as of December 31, 2017 to 340,447 billion as of December 31, 2018, principally due to a 3.7% increase in loans from 251,523 billion as of December 31, 2017 to 260,820 billion as of December 31, 2018, which was enhanced by a 36.9% increase in held-to-maturity financial assets of 16,749 billion as of December 31, 2017 compared to securities at amortized cost of 22,933 billion as of December 31, 2018 and a 59.6% increase in due from banks from 8,868 billion as of December 31, 2017 to 14,151 billion as of December 31, 2018.

The increase in loans was mainly attributable to a 5.2% increase in loans in local currency from 200,213 billion as of December 31, 2017 to 210,701 billion as of December 31, 2018, which was partially offset by a 30.6% decrease in bonds purchased under resale agreements from 16,859 billion as of December 31, 2017 to 11,702 billion as of December 31, 2018. The increase in held-to-maturity financial assets as of December 31, 2017 compared to securities at amortized cost as of December 31, 2018 was primarily attributable to an 88.3% increase in such securities of Korean treasury and government agencies from 3,995 billion as of December 31, 2017 to 7,523 billion as of December 31, 2018 and a 30.8% increase in such securities of financial institutions from 7,245 billion as of December 31, 2017 to 9,475 billion as of December 31, 2018. The increase in due from banks was mainly the result of a 76.7% increase in amounts due from the Bank of Korea from 6,246 billion as of December 31, 2017 to 11,035 billion as of December 31, 2018.

Comparison of 2017 to 2016

Our total assets increased 1.8% from 310,683 billion as of December 31, 2016 to 316,295 billion as of December 31, 2017, primarily as a result of a 6.8% increase in loans from 235,401 billion as of December 31, 2016 to 251,523 billion as of December 31, 2017. This increase in loans was mainly the result of a 4.7% increase in loans in local currency from 191,309 billion as of December 31, 2016 to 200,213 billion as of December 31, 2017 and a 90.4% increase in bonds purchased under resale agreement from 8,855 billion as of December 31, 2016 to 16,859 billion as of December 31, 2017. Such increase was partially offset by a 40.1% decrease in due from banks from 14,821 billion as of December 31, 2016 to 8,871 billion as of December 31, 2017.

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Liabilities and Equity

The following table sets forth, as of the dates indicated, the principal components of our liabilities and our equity:

	As of December 31,			Percentage change	
	2016	2017	2018	2017/2016	2018/2017
	(in billions of Won)			(%)	
Liabilities:					
Financial liabilities at fair value through profit or loss (IFRS 9)			2,283	N/A[1]	N/A
Financial liabilities at fair value through profit or loss (IAS 39)	3,803	3,428		(9.9)%	N/A
Deposits due to customers	221,020	234,695	248,691	6.2	6.0%
Borrowings	18,770	14,785	16,203	(21.2)	9.6
Debentures	23,566	27,870	28,736	18.3	3.1
Provisions	429	410	391	(4.4)	(4.6)
Other financial liabilities	21,985	13,892	21,443	(36.8)	54.4
Other liabilities[2]	564	651	747	15.4	14.7
Total liabilities	290,137	295,730	318,494	1.9	7.7
Equity:					
Owner s equity:					
Capital stock	3,381	3,381	3,381		
Hybrid securities	3,575	3,018	3,162	(15.6)	4.8
Capital surplus	286	286	286		
Other equity	(1,468)	(1,939)	(2,214)	32.1	14.2
Retained earnings[3]	14,612	15,620	17,125	6.9	9.6
	20,386	20,366	21,740	(0.1)	6.7
Non-controlling interests	160	199	213	24.4	7.0
Total equity	20,546	20,565	21,953	0.1	6.7
Total liabilities and equity	310,683	316,295	340,447	1.8%	7.6%

(1) N/A = not applicable.

(2) Includes net defined benefit liability, current tax liabilities, deferred tax liabilities, derivative liabilities and other liabilities.

(3) Includes regulatory reserve for credit loss of 2,255 billion as of December 31, 2016, 2,438 billion as of December 31, 2017 and 2,578 billion as of December 31, 2018.

For further information on our liabilities, see Item 4.B. Business Overview Assets and Liabilities.

Comparison of 2018 to 2017

Our total liabilities increased 7.7% from 295,730 billion as of December 31, 2017 to 318,494 billion as of December 31, 2018, principally as a result of a 6.0% increase in deposits due to customers from 234,695 billion as of December 31, 2017 to 248,691 billion as of December 31, 2018, which was enhanced by a 54.4% increase in other financial liabilities from 13,892 billion as of December 31, 2017 to 21,443 billion as of December 31, 2018. The increase in deposits due to customers was primarily due to a 5.0% increase in time deposits in local currency from 194,293 billion as of December 31, 2017 to 204,052 billion as of December 31, 2018. The increase in other financial liabilities primarily reflected a 444.7% increase in domestic exchange payables from 1,310 billion as of December 31, 2017 to 7,135 billion as of December 31, 2018.

Our total equity increased 6.7% from 20,565 billion as of December 31, 2017 to 21,953 billion as of December 31, 2018. Such increase mainly reflected a 9.6% increase in retained earnings from 15,620 billion as of December 31, 2017 to 17,125 billion as of December 31, 2018, which was enhanced by a 4.8% increase in hybrid securities from 3,018 billion as of December 31, 2017 to 3,162 billion as of December 31, 2018. Such increases were partially offset by a 14.2% increase in negative other equity from 1,939 billion as of December 31, 2017 to 2,214 billion as of December 31, 2018, primarily reflecting a significant increase in accumulated other comprehensive loss from 90 billion as of December 31, 2017 to 572 billion as of December 31, 2018, which was partially offset by an 11.4% decrease in negative other capital adjustments from 1,815 billion as of December 31, 2017 to 1,608 billion as of December 31, 2018. The increase in accumulated other comprehensive loss was principally attributable to a change from gain on valuation of available-for-sale financial assets of 302 billion as of December 31, 2017 to a net loss on valuation of financial assets at fair value through other comprehensive income of 87 billion, resulting mainly from adjustments relating to the reclassification of certain available-for-sale financial assets under IAS 39 to financial assets at fair value through other comprehensive income and financial assets at fair value through profit or loss under IFRS 9. For further information regarding the impact of the adoption of IFRS 9 on our equity, see Note 2-(1)-1)-e) of the notes to our consolidated financial statements included elsewhere in this annual report.

Comparison of 2017 to 2016

Our total liabilities increased 1.9% from 290,137 billion as of December 31, 2016 to 295,730 billion as of December 31, 2017, primarily as a result of increases in deposits due to customers and debentures, the effect of which was partially offset by decreases in other financial liabilities and borrowings. Our deposits due to customers increased 6.2% from 221,020 billion as of December 31, 2016 to 234,695 billion as of December 31, 2017, mainly due to a 5.8% increase in time deposits in local currency from 183,723 billion as of December 31, 2016 to 194,293 billion as of December 31, 2017. Debentures increased 18.3% from 23,566 billion as of December 31, 2016 to 27,870 billion as of December 31, 2017, primarily due to higher issuances of debentures in anticipation of rising interest rate levels. Other financial liabilities decreased 36.8% from 21,985 billion as of December 31, 2016 to 13,892 as of December 31, 2017, principally due to an 84.6% decrease in domestic exchange payables from 8,481 billion as of December 31, 2016 to 1,310 billion as of December 31, 2017. Borrowings decreased 21.2% from 18,770 billion as of December 31, 2016 to 14,785 as of December 31, 2017, primarily as a result of a significant decrease in bonds sold under repurchase agreements from 2,005 billion as of December 31, 2016 to 3 billion as of December 31, 2017.

Our total equity remained relatively stable at 20,565 billion as of December 31, 2017, compared to 20,546 billion as of December 31, 2016. A 6.9% increase in retained earnings from 14,612 billion as of December 31, 2016 to 15,620 billion as of December 31, 2017 was offset by a 15.6% decrease in hybrid securities from 3,575 billion as of December 31, 2016 to 3,018 billion as of December 31, 2017 and a 32.1% increase in negative other equity from 1,468 billion as of December 31, 2016 to 1,939 billion as of December 31, 2017. The increase in retained earnings was attributable mainly to the net income we generated in 2017. The decrease in hybrid securities was principally due to the redemptions of Won-denominated hybrid securities in March 2017 and U.S. dollar-denominated hybrid securities in May 2017, which were offset in part by the issuance of U.S. dollar-denominated hybrid securities in May 2017. The increase in negative other equity was primarily attributable to a 12.9% increase in negative other capital adjustments from 1,607 billion as of December 31, 2016 to 1,815 billion as of December 31, 2017 and a more than four-fold increase in loss on foreign currency translation of foreign operations from 48 billion as of December 31, 2016 to 243 billion as of December 31, 2017.

Liquidity

Our primary source of funding has historically been and continues to be customer deposits, particularly lower-cost retail deposits. Customer deposits amounted to 221,020 billion, 234,695 billion and 248,691 billion as of December 31, 2016, 2017 and 2018, which represented approximately 82.8%, 82.7% and 82.7% of our total funding, respectively. We have historically been able to use customer deposits to finance our operations generally, including meeting a portion of our liquidity requirements. Although the majority of deposits are short term, it has been our experience that the majority of our depositors generally roll over their deposits at maturity, thus providing us with a stable source of funding. However, in the event that a substantial number of our depositors do not roll over their deposits or otherwise decide to withdraw their deposited funds, we would need to place increased reliance on alternative sources of funding, some of which may be more expensive than customer deposits, in order to finance our operations. See Item 3.D. Risk Factors Other risks relating to our business Our funding is highly dependent on short-term deposits, which dependence may adversely affect our operations. In particular, we may increase our utilization of alternative funding sources such as short-term borrowings and cash and cash equivalents (including funds from maturing loans), as well as liquidating our positions in trading and investment securities and using the proceeds to fund parts of our operations, as necessary.

We also obtain funding through borrowings and issuances of debentures to meet our liquidity needs. Borrowings represented 7.0%, 6.4% and 6.6% of our total funding as of December 31, 2016, 2017 and 2018, respectively. Debentures represented 8.8%, 9.8% and 9.6% of our total funding as of December 31, 2016, 2017 and 2018, respectively. For further information on our sources of funding, see Item 4.B. Business Overview Assets and Liabilities Funding.

Our liquidity risks arise from withdrawals of deposits and maturities of our borrowings and debentures, as well as our need to fund our lending, trading and investment activities and to manage our trading positions. Our goal in managing our liquidity is to be able, even under adverse conditions, to meet all of our liability repayments on time and to fund all investment opportunities. For a discussion of how we manage our liquidity risk, see Item 11. Quantitative and Qualitative Disclosures about Market Risk Liquidity Risk Management.

The Financial Services Commission requires each Korean financial holding company and each Korean bank to maintain specific Won and foreign currency liquidity ratios. These ratios require us to keep our ratio of liquid assets to liquid liabilities above certain minimum levels. For a description of these requirements, see Item 4.B. Business Overview Supervision and Regulation Principal Regulations Applicable to Financial Holding Companies Liquidity and Principal Regulations Applicable to Banks Liquidity.

We are a financial holding company, and substantially all of our operations are in our subsidiaries. Accordingly, we rely on distributions from our subsidiaries, direct borrowings and issuances of debt and equity securities to fund our liquidity obligations at the holding company level. See Item 3.D. Risk Factors Risks relating to our financial holding company structure and strategy.

Contractual Obligations and Off-Balance Sheet Arrangements

The following table sets forth our contractual obligations as of December 31, 2018:

	Payments due by period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
	(in billions of Won)				
Contractual obligations					
Borrowing obligations[1]	16,500	12,702	2,399	757	642
Debenture obligations[1]	30,714	9,356	13,432	5,523	2,403
Deposits[2][3]	252,216	243,247	6,364	735	1,870
Operating lease obligations	1,475	249	487	482	257
Purchase obligations	59	12	19	18	10

Employee severance plan obligations	2,524	81	155	140	2,148
Total	303,488	265,647	22,856	7,655	7,330

(1) Includes estimated future interest payments, which have been estimated using contractual interest rates and scheduled contractual maturities of the outstanding borrowings and debentures as of December 31, 2018. In order to calculate future interest payments on debts with floating rates, we used contractual interest rates as of December 31, 2018.

(2) Comprising certificates of deposit, other time deposits and installment deposits.

(3) Includes estimated future interest payments, which have been estimated using weighted average interest rates paid for 2018 for each deposit product category and their scheduled contractual maturities.

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We utilize credit-related financial instruments with off-balance sheet risk in our normal course of business. The primary purpose of those instruments is to generate fee income for us, in return for making credit support and funds available to our customers as required. Such instruments consist primarily of guarantees, commercial letters of credit and unused lines of credit. Guarantees include guarantees for loans, debentures, trade financing arrangements and guarantees for other financings. Contingent liabilities for which guaranteed amounts are not finalized appear as off-balance sheet items in the notes to the financial statements. Such contingent liabilities include, among others, contingent liabilities relating to trade financings and derivatives contracts with respect to foreign exchange rates and interest rates.

We also enter into transactions with certain structured entities, including through the purchase of their subordinated debt and the provision of credit facilities to them. For further information, see Notes 1-(5) and 1-(6) of the notes to our consolidated financial statements included elsewhere in this annual report.

The following table sets forth our off-balance sheet guarantees and commitments as of the dates indicated:

	As of December 31,		
	2016	2017	2018
	(in billions of Won)		
Confirmed guarantees	8,270	6,875	7,108
Guarantees for loans	80	157	126
Acceptances	504	321	372
Guarantees in acceptances of imported goods	98	108	158
Other confirmed guarantees	7,588	6,289	6,452
Unconfirmed guarantees	5,102	4,527	4,297
Local letter of credit	398	383	305
Letter of credit	3,844	3,638	3,323
Other unconfirmed guarantees	860	506	669
Commercial paper purchase commitments and others	1,390	1,458	1,261
Loan commitments and others:			
Loans	83,795	80,760	97,797
Others	4,841	4,546	5,041

We analyze our off-balance sheet legally binding credit-related commitments for possible losses associated with such commitments. We review the ability of the counterparties of the underlying credit-related commitments to perform their obligations under the commitments and, if we determine that a loss is probable and estimable, we establish allowances for possible losses in a manner similar to allowances that we would establish with respect to a loan granted under the terms of the applicable commitment. These allowances are reflected as provisions in our statement of financial position. As of December 31, 2018, we had established provisions for possible losses of 211 billion with respect to our credit-related commitments.

Capital Adequacy

We are subject to the capital adequacy requirements of the Financial Services Commission. The requirements applicable commencing in December 2013 pursuant to amended Financial Services Commission regulations promulgated in July 2013 were formulated based on Basel III, which was first introduced by the Basel Committee on Banking Supervision, Bank for International Settlements in December 2009. Under the amended Financial Services Commission regulations, all financial holding companies and banks in Korea are required to maintain certain minimum ratios of Tier I common equity capital, total Tier I capital and total Tier I and Tier II capital to risk-weighted assets. See Item 4.B. Business Overview Supervision and Regulation Principal Regulations Applicable to Financial Holding Companies Capital Adequacy and Principal Regulations Applicable to Banks Capital Adequacy.

If a financial holding company or a bank fails to maintain its capital adequacy ratios, the Korean regulatory authorities may impose penalties on such financial holding company or bank ranging from a warning to suspension or revocation of its license. See Item 3.D. Risk Factors Other risks relating to our business We

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may be required to raise additional capital if our capital adequacy ratio deteriorates or the applicable capital requirements change in the future, but we may not be able to do so on favorable terms or at all.

The following table sets forth a summary of our capital and capital adequacy ratios as of December 31, 2016, 2017 and 2018 based on IFRS and applicable regulatory reporting standards:

	As of December 31,		
	2016	2017	2018
	(in billions of Won, except percentages)		
Tier I capital			
Tier I common equity capital			
Capital stock	3,381	3,381	3,381
Capital surplus	286	286	286
Retained earnings	14,612	15,620	17,125
Non-controlling interests in consolidated subsidiaries	22	19	22
Others	(2,586)	(3,231)	(3,538)
Additional Tier I capital			
Hybrid securities	3,232	3,006	3,130
Other equity	43	35	17
Total Tier I capital	18,990	19,116	20,423
Tier II capital			
Allowance for credit losses[1]	145	78	194
Subordinated debt	2,292	1,870	1,507
Others	1,474	1,539	2,127
Total Tier II capital	3,911	3,487	3,828
Total Tier I and Tier II capital	22,901	22,603	24,251
Risk-weighted assets			
Credit risk-weighted assets	138,018	134,768	142,626
Market risk-weighted assets	2,278	2,317	2,372
Operational risk-weighted assets	9,432	9,677	9,973
Total	149,728	146,762	154,971
Tier I common equity capital ratio	10.50%	10.95%	11.15%
Total Tier I capital ratio	12.68	13.03	13.18
Tier II capital ratio	2.61	2.37	2.47
Total Tier I and Tier II capital ratio	15.29	15.40	15.65

(1)

Allowance for credit losses in respect of credits classified as normal or precautionary is used to calculate Tier II capital only to the extent such allowances represent up to 1.25% of risk-weighted assets.

Recent Accounting Pronouncements

See Note 2-(1)-2) of the notes to our consolidated financial statements for a description of other recent accounting pronouncements under IFRS as issued by the IASB that have been issued but are not yet effective.

Item 5.C. ***Research and Development, Patents and Licenses, etc.***

Not Applicable

Item 5.D. ***Trend Information***

These matters are discussed under Item 5.A and Item 5.B above where relevant.

Item 5.E. ***Off-Balance Sheet Arrangements***

See Item 5.B. Liquidity and Capital Resources Financial Condition Contractual Obligations and Off-Balance Sheet Arrangements.

Item 5.F. ***Tabular Disclosure of Contractual Obligations***

See Item 5.B. Liquidity and Capital Resources Financial Condition Contractual Obligations and Off-Balance Sheet Arrangements.

Item 5.G. ***Safe Harbor***

See Forward-Looking Statements.

Item 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

Item 6.A. ***Directors and Senior Management***

Board of Directors

Our board of directors has the ultimate responsibility for managing our affairs. The board currently comprises one standing director, one non-standing director and five outside directors. Standing directors are directors who are our full-time executive officers, while non-standing directors and outside directors are directors who are not full-time executive officers. Outside directors represent a cross-section of respected and experienced members of the academic, financial, corporate and other fields in Korea and elsewhere, and must also satisfy certain requirements under Korean law and our articles of incorporation to evidence their independence from us.

Our articles of incorporation provide that the board can have no more than 15 directors. There must be at least three outside directors and they must comprise a majority of the directors. Each director may be elected for a term of office not exceeding three years and may be re-elected, provided that each outside director may be elected for a term of office not exceeding two years and may be re-elected on an annual basis but may not serve in such office for more than a total of six years. In addition, with respect to all directors, such term of office will be extended until the close of the annual general meeting of shareholders convened in respect of the last fiscal year of the director s term of office. These terms are subject to the Korean Commercial Code, the Financial Holding Company Act and related regulations.

Pursuant to an agreement Woori Bank entered into with the KDIC in December 2016, Woori Bank was required to use its best efforts to cause an employee of the KDIC nominated by it to be appointed as Woori Bank s non-standing director, so long as the KDIC either (x) owned 10% or more of Woori Bank s issued shares with voting rights or (y) owned more than 4% but less than 10% of Woori Bank s total issued shares with voting rights and remained Woori Bank s largest shareholder (other than the National Pension Service of Korea). While such agreement with Woori Bank has expired, we expect to enter into an agreement with similar terms with the KDIC in the first half of 2019. See Item 10.C. Material Contracts.

Our board of directors meets regularly on a quarterly basis to discuss and resolve various corporate matters. The board may also convene for additional extraordinary meetings at the request of the president or chairman of the board. A director (other than the president or chairman of the board) may request the president or chairman of the board to convene an extraordinary meeting. In the event that the president or chairman of the board rejects such request without justifiable reason, another director may convene the extraordinary meeting.

The names and positions of our directors are set forth below. The business address of all of the directors is our registered office at 51, Sogong-ro, Jung-gu, Seoul, Korea.

Standing Director

Our standing director is as follows:

Name	**Age**	**Position**	**Director Since**	**Year Term Ends**[1]
Tae-Seung Sohn	60	President and Chief Executive Officer	December 22, 2017[2]	2020

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(1) The date on which the term will end will be the date of the general shareholders meeting in the relevant year.
(2) Prior to January 11, 2019, served as a director of Woori Bank.
Such director is not involved in any significant business activities outside us and our subsidiaries.

Tae-Seung Sohn was elected at an extraordinary general meeting of Woori Bank s shareholders held in December 2018 to serve as our president and chief executive officer upon our establishment, and has also been serving as the president and chief executive officer of Woori Bank since December 2017. Previously, he served as head of the global business unit of Woori Bank. Prior to that, he was a managing director of the financial market business division. Mr. Sohn holds a Bachelor of Laws from Sungkyunkwan University, a Master of Laws from Seoul National University and a Master of Business Administration from the Helsinki School of Economics.

Non-Standing Director

Our non-standing director is as follows:

Name	Age	Position	Director Since	Year Term Ends(1)
Chang-Sik Bae	55	Non-Standing Director	March 23, 2018(2)	2020

(1) The date on which the term will end will be the date of the general shareholders meeting in the relevant year.
(2) Prior to January 11, 2019, served as a director of Woori Bank.
Chang-Sik Bae was elected at an extraordinary general meeting of Woori Bank s shareholders held in December 2018 to serve as our non-standing director upon our establishment, and was previously a non-standing director of Woori Bank (from which position he resigned as of December 28, 2018). He currently serves as Senior General Manager of Human Resources and Administration at the KDIC. He holds a Bachelor of Arts in International Trade from Hankuk University of Foreign Studies.

Outside Directors

We currently have five outside directors. Pursuant to a commitment made by the KDIC in connection with the bidding process for the sale of a combined 29.7% ownership interest in Woori Bank in December 2016 and January 2017, five of the seven winning bidders each nominated one person to become a new outside director, and each such nominee was elected as a new outside director at an extraordinary general meeting of Woori Bank s shareholders held in December 2016. In December 2018, five persons, each nominated by one of such winning bidders, were elected at an extraordinary general meeting of Woori Bank s shareholders to serve as our outside directors upon our establishment. Three of such persons concurrently serve as outside directors of Woori Bank. See Item 4.A. History and Development of the Company Privatization Plan Sales of the KDIC s Ownership Interest.

Our outside directors are as follows:

Name	Age	Position	Director Since	Year Term Ends(1)

Sung-Tae Ro	72	Outside Director	December 30, 2016(2)	2021
Sang-Yong Park	68	Outside Director	December 30, 2016(2)	2021
Chan-Hyoung Chung	63	Outside Director	December 28, 2018(2)	2021
Zhiping Tian	53	Outside Director	December 30, 2016(2)	2021
Dong-Woo Chang	52	Outside Director	December 30, 2016(2)	2021

(1) The date on which the term will end will be the date of the general shareholders meeting in the relevant year.

(2) Prior to January 11, 2019, served as a director of Woori Bank.

Dong-Woo Chang was elected as an outside director in December 2018 and was previously an outside director of Woori Bank. He is currently the chief executive officer and representative director of IMM Investment Corp. He holds a Bachelor of Laws from Hanyang University.

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Chan-Hyoung Chung was elected as an outside director in December 2018 and concurrently serves as an outside director of Woori Bank. He also currently serves as an advisor to POSCO Capital. He holds a Bachelor of Arts in Business Administration and a Master of Business Administration from Korea University.

Sang-Yong Park was elected as an outside director in December 2018 and was previously and is currently an outside director of Woori Bank. He also currently serves as professor emeritus at the School of Business at Yonsei University. He holds a Bachelor of Arts in Business Administration from Yonsei University and a Master of Business Administration and a Ph.D. in Business Administration from New York University.

Sung-Tae Ro was elected as an outside director in December 2018 and was previously and is currently an outside director of Woori Bank. He currently serves as chairman of Samsung Dream Scholarship Foundation. He holds a Bachelor of Arts in Economics from Seoul National University and a Master of Arts and a Ph.D. in Economics from Harvard University.

Zhiping Tian was elected as an outside director in December 2018 and was previously an outside director of Woori Bank. He currently serves as a vice general manager at China Fellow Partners Limited. He holds a Bachelor of Arts in Government Economics Management from Shanxi University of Finance & Economics, an International Master of Business Administration from the University of Hong Kong and a Master of Business Administration from the Southwestern University of Finance and Economics.

If any director wishes to enter into a transaction with us in his or her personal capacity, he or she must obtain the prior approval of our board of directors. The director having an interest in the transaction may not vote at the meeting during which the board approves the transaction.

Executive Officers

In addition to the standing directors who are also our executive officers, we currently have the following six executive officers.

Name	Age	Position
Dong-Su Choi	57	Deputy President
Kyong-Hoon Park	57	Deputy President
Jin-Ho Noh	55	Senior Managing Director
Kyu-Mok Hwang	56	Managing Director and Compliance Officer
Seok-Tae Lee	55	Managing Director
Seok-Young Chung	55	Managing Director

Dong-Su Choi serves as a deputy president and head of the management support unit. Previously, he served as head of the future strategy division, the head office business department and the consumer protection center of Woori Bank. He holds a Bachelor of Arts in Economics from Chung-Ang University and a Master of Business Administration from Korea University.

Kyong-Hoon Park serves as a deputy president and head of the management and finance planning unit. Previously, he served as a managing director of the future strategy division of Woori Bank and head of the global business group and the head office corporate banking headquarters I of Woori Bank. He holds a Bachelor of Arts in International Economics from Seoul National University.

Jin-Ho Noh serves as a senior managing director and head of the ICT planning division. Previously, he served as representative director of Hancom Inc., a senior managing director at Woori FIS and a vice president and advisor of LG CNS. He holds a Bachelor of Arts in Business Administration from Korea University and a Master of Arts in Management Science from Lancaster University.

Kyu-Mok Hwang serves a managing director and the compliance officer. Previously, he served as a senior general manager of the future strategy division and head of the head office corporate banking headquarters I and the deposit service center of Woori Bank. He holds a Bachelor of Arts in Public Administration from Inha University and a Master of Arts in Public Administration from Yonsei University.

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Seok-Tae Lee serves as a managing director and head of the strategy planning division. Previously, he served as a senior general manager and head of the future strategy department, a senior general manager of the management and finance planning division and a general manager and head of the strategy and planning department of Woori Bank. He holds a Bachelor of Arts in Business Administration from Chung-Ang University.

Seok-Young Chung serves as a managing director and head of the risk management unit. Previously, he served as a senior general manager of the future strategy division and head of the Seodaemun regional banking headquarters of Woori Bank. He holds a Bachelor of Arts in Business Administration and a Master of Arts in Economics from Yonsei University.

None of the executive officers is involved in any significant business activities outside us and our subsidiaries.

Item 6.B. *Compensation*

The aggregate remuneration and benefits-in-kind we paid in 2018 to our directors and our other executive officers, including the compliance officer and managing directors, was 7,980 million, which includes 302 million in provisions for allowances for severance and retirement benefits for such directors and officers. We do not have service contracts with any of these directors or officers that provide for benefits if employment with us is terminated.

The compensation of our director who received total annual compensation exceeding 500 million in 2018 was as follows:

Name	Position	Total Compensation in 2018 (in millions of Won)
Tae-Seung Sohn	President and Chief Executive Officer	844

In 2018, we did not grant any stock options and, accordingly, did not recognize any compensation expense for stock options granted under our stock option plan. As of the date of this annual report, we do not have any stock options outstanding.

Item 6.C. *Board Practices*

See Item 6.A. Directors and Senior Management Board of Directors and Item 6.B. Compensation for information concerning the terms of office and contractual employment arrangements with our directors and executive officers.

Committees of the Board of Directors

We currently have five committees that serve under the board:

- the Audit Committee;
- the Board Risk Management Committee;

- the Compensation Committee; and
- the Committee for Recommending Executive Officer Candidates;
- the Committee for Recommending Group Executive Officer Candidates.

The board appoints each member of these committees except for members of the Audit Committee, who are elected by our shareholders at the annual general meeting.

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Audit Committee

This committee consists of three outside directors: Dong-Woo Chang, Chan-Hyoung Chung and Sung-Tae Ro. The chairman is Chan-Hyoung Chung. It reviews all audit and compliance-related matters and makes recommendations to our board. The Audit Committee, whose members must meet certain qualifications as experts under the committee charter, is also responsible for the following:

- formulating, executing, evaluating and managing internal audit plans (including the financial and operational audits);
- approving the appointment and dismissal of the head of the audit team;
- approving the appointment of external auditors and evaluating the activities carried out by external auditors;
- formulating appropriate measures to correct problems identified from internal audits;
- overseeing the reporting systems within our financial holding company structure in light of relevant disclosure rules and requirements to ensure compliance with applicable regulations; and
- examining internal procedures or making decisions on material matters that are related to audits as determined by the regulatory authorities, our board or other committees.

This committee also makes recommendations on regulatory issues to the Financial Supervisory Service, if and when deemed necessary. In addition, in connection with general meetings of shareholders, the committee examines the agenda for, and financial statements and other reports to be submitted by the board of directors, to each general meeting of shareholders. The internal and external auditors report directly to the Audit Committee chairman. Our external auditor is invited to attend meetings of this committee when needed or when matters pertaining to the audit are discussed. The subsidiary-level audit committees, which review subsidiary-level internal practices, report to the Audit Council that in turn reports to this committee.

This committee holds regular meetings every quarter or as necessary.

Board Risk Management Committee

This committee consists of one non-standing director and two outside directors: Chang-Sik Bae, Sang-Yong Park and Zhiping Tian. The chairman is Sang-Yong Park. It oversees and makes determinations on all significant issues relating to our risk management system. It implements policies regarding, monitors and has ultimate responsibility for managing credit, market and liquidity risk and asset for liability management. The major roles of the Board Risk Management Committee include:

determining and amending risk management policies, guidelines and limits in conformity with the strategy established by the board of directors;

determining the appropriate level of risks that we should be willing to undertake, including in connection with key business activities such as acquisitions, investments or entering into new business areas, prior to a decision by the board of directors on such matters;

allocating risk capital and approving the risk limit requests of our subsidiaries;

reviewing our risk profile, including the level of risks we are exposed to and the status of our risk management operations; and

monitoring compliance with our risk policies.

This committee regularly receives reports from the Group Risk Management Council as well as the Group Risk Management Department, which in turn receives reports from subsidiary level risk management committees and groups. See Item 11. Quantitative and Qualitative Disclosures about Market Risk. This committee holds regular meetings every quarter.

Compensation Committee

This committee consists of one non-standing director and all five of our outside directors: Chang-Sik Bae, Dong-Woo Chang, Chan-Hyoung Chung, Sang-Yong Park, Sung-Tae Ro and Zhiping Tian. The chairman is Chan-Hyoung Chung. It is responsible for all matters relating to the following:

- evaluating management s performance in developing our business;
- setting goals and targets with respect to executive performance; and
- fixing executive compensation, including incentives and bonuses.

This committee holds regular meetings every quarter.

Committee for Recommending Executive Officer Candidates

This committee consists of all five of our outside directors: Dong-Woo Chang, Chan-Hyoung Chung, Sang-Yong Park, Sung-Tae Ro and Zhiping Tian. The chairman is Dong-Woo Chang. The committee oversees the selection of candidates for the president and chief executive officer, outside directors and Audit Committee members, among others. This committee holds meetings when such persons need to be appointed.

Committee for Recommending Group Executive Officer Candidates

This committee consists of one standing director and all of our five outside directors: Tae-Seung Sohn, Chan-Hyoung Chung, Dong-Woo Chang, Sang-Yong Park, Sung-Tae Ro and Zhiping Tian. The chairman is Tae-Seung Sohn. The committee oversees the selection of candidates for the chief executive officers of our subsidiaries, among others. This committee holds meetings when such persons need to be appointed.

Item 6.D. *Employees*

As of December 31, 2018, we had a total of 14,011 full-time employees at Woori Bank, excluding employees of its subsidiaries. The following table sets forth information regarding our employees as of the dates indicated:

	As of December 31,		
	2016	**2017**	**2018**
Full-time employees	14,861	13,637	14,011
Contractual employees	675	625	1,074
Total	15,536	14,262	15,085

At the holding company level, our employees do not currently have a labor union and none of such employees are members of an outside labor union. At each of our subsidiaries, our employees have a labor union, and approximately

68.1% of Woori Bank s employees as of December 31, 2018 were members of the Korea Financial Industry Union. Neither we nor any of our subsidiaries have experienced any significant labor disputes in recent years, although we have made certain concessions to our labor unions. See Item 3.D. Risk Factors Other risks relating to our business Labor union unrest may disrupt our operations and hinder our ability to continue to reorganize our operations. We have placed a high priority on our relationship with our employees and on maintaining an atmosphere of trust and cooperation between our labor and management.

At the holding company level, our salary system with respect to our employees is based on a combination of the agreed-upon base salary and bonuses reflecting the work productivity and performance of each employee and the relevant business unit. We believe that the salaries we pay to our employees and management are similar to those of other large financial companies in Korea. We evaluate employees twice a year (usually in March and September), based on our business performance and evaluations provided by co-workers and superiors. With respect to our compensation program, we do not provide housing leases or loans to our employees.

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At our subsidiaries, employee compensation is generally based on a combination of the agreed-upon base salary and bonuses. In addition, Woori Bank operates a salary peak system, under which an employee s salary reaches a certain peak and then is gradually reduced as the employee reaches retirement age. The bonus system at our subsidiaries is generally based on individual performance and business unit performance. We believe that our compensation package for our subsidiaries is similar to that of institutions in the same industries. We also provide a wide range of benefits to our employees, including medical insurance, employment insurance, workers compensation, accident insurance, financial aid for children s tuition and retirement pension plans.

We have an employee stock ownership association, which purchases our shares at the request of our employees using their own funds and financial support by us depending on the amount of purchase by employee. The association is entitled to certain pre-emptive rights. See Item 10B. Memorandum and Articles of Association Pre-emptive Rights and Issuances of Additional Shares.

In accordance with the National Pension Act, we contribute an amount equal to 4.5% of an employee s salary, and each employee contributes 4.5% of his or her salary, into each employee s personal pension account. In addition, in accordance with the Guarantee of Worker s Retirement Benefits Act, we have adopted a retirement pension plan for our employees. Contributions under the retirement pension plan are deposited annually into a financial institution, and an employee may elect to receive a monthly pension or a lump-sum amount upon retirement. Our retirement pension plans are provided in the form of a defined benefit plan and a defined contribution plan. The defined benefit plan guarantees a certain payout at retirement, according to a fixed formula based on the employee s average salary and the number of years for which the employee has been a plan member. The defined contribution plan, in which the employer s contribution is determined in advance based on one-twelfth of an employee s total annual pay, is managed directly by the employees. Under Korean law, we may not terminate the employment of full-time employees except under certain limited circumstances.

Item 6.E. ***Share Ownership***

Common Stock

As of April 23, 2019, the persons who are currently our directors or executive officers, in the aggregate, held 128,780 shares of our common stock. None of these persons individually held more than 1% of our outstanding common stock as of such date. The following table presents information regarding our directors and executive officers who beneficially owned our shares as of April 23, 2019.

Name of Executive Officer or Director	Number of Shares of Common Stock
Tae-Seung Sohn	48,127
Sang-Yong Park	1,000
Sung-Tae Ro	5,000
Chan-Hyoung Chung	10,532
Dong-Su Choi	12,738
Kyong-Hoon Park	12,973
Kyu-Mok Hwang	12,239
Seok-Tae Lee	12,857
Seok-Young Chung	13,314

Total	128,780

Stock Options

As of the date of this annual report, we do not have any stock options outstanding.

Item 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

Item 7.A. *Major Shareholders*

The following table presents information regarding the beneficial ownership of our common stock at April 23, 2019 (unless otherwise indicated) by each person or entity known to us to own beneficially more than 5% of the outstanding shares of our common stock.

Except as otherwise indicated, each shareholder identified by name has:

- sole voting and investment power with respect to its shares; and
- record and beneficial ownership with respect to its shares.

Beneficial Owner	Number of Shares of Common Stock	Percentage of Total Shares of Common Stock	Percentage of Total Shares on a Fully Diluted Basis
KDIC	124,604,797	18.32	18.32
National Pension Service	56,953,093	8.37	8.37
Nobis1, Inc.[(1)]	40,560,000	5.96	5.96

(1) Nobis1, Inc., which is an affiliate of IMM Private Equity, acquired 27,040,000 shares of Woori Bank s common stock, or 4.00% of its outstanding common stock, in December 2016. In accordance with the Bank Act, Nobis1, Inc. received approval from the Financial Services Commission for the acquisition of an additional 13,520,000 shares of Woori Bank s common stock, or 2.00% of its outstanding common stock, in January 2017, pursuant to an agreement not to exercise the voting rights with respect to such shares. Such shares were exchanged for shares of our common stock in January 2019 in the stock transfer.

Pursuant to the Korean government s privatization plan, in December 2014, the KDIC sold 40,143,022 shares of Woori Bank s common stock (representing 5.9% of its outstanding common stock) in a private sale in Korea. In addition, in December 2016 and January 2017, the KDIC sold an aggregate of 200,685,395 shares of Woori Bank s common stock (representing 29.7% of its outstanding common stock) in stakes ranging from 3.7% to 6.0% to seven financial companies through a bidding process. Pursuant to a commitment made by the KDIC in connection with such bidding process, five persons, each nominated by one of the winning bidders, were elected as new outside directors at an extraordinary general meeting of Woori Bank s shareholders held in December 2016. In December 2018, five persons, each nominated by one of such winning bidders, were elected at an extraordinary general meeting of Woori Bank s shareholders to serve as our outside directors upon our establishment. See Item 6.A. Directors and Senior Management Board of Directors Outside Directors. In 2017, pursuant to a series of transactions related to call options previously granted in connection with the KDIC s sale of Woori Bank s common stock in December 2014, the KDIC sold an aggregate of 19,852,364 shares of Woori Bank s common stock (representing 2.94% of its outstanding common stock). As a result of such transactions, the KDIC s ownership interest in Woori Bank was reduced to 18.43%. In connection with our establishment in January 2019 as a new financial holding company pursuant to a comprehensive stock transfer under Korean law, the KDIC received our common stock in exchange for the common stock of Woori Bank it owned, as a result of which the KDIC currently owns 18.32% of our outstanding common stock. We expect that the KDIC will sell all or a portion of such common stock to one or more purchasers in the future.

As of April 23, 2019, our president and chief executive officer owned 48,127 shares of our common stock. Our executive officers (excluding our president and chief executive officer) collectively owned 64,121 shares of our common stock. Our outside directors collectively owned 16,532 shares of our common stock.

Other than as set forth above, no other person or entity known by us to be acting in concert, directly or indirectly, jointly or separately, owned 5.0% or more of the outstanding shares of our common stock or exercised control or could exercise control over us as of April 23, 2019. None of our major shareholders has different voting rights from our other shareholders. However, pursuant to an agreement Woori Bank entered into with the KDIC in December 2016, the KDIC had the right to require Woori Bank to use its best efforts to cause an employee of the KDIC nominated by it to be appointed as Woori Bank s non-standing director, so long as the KDIC either (x) owned 10% or more of Woori Bank s total issued shares with voting rights or (y) owned more than 4% but less than 10% of Woori Bank s total issued shares with voting rights and remained its largest shareholder (other than the National Pension Service of Korea). We expect to enter into an agreement with similar terms with the KDIC in the first half of 2019. See Item 10.C. Material Contracts.

As of the close of Woori Bank s shareholders register on December 31, 2018, approximately 72.4% of its issued shares were held in Korea by approximately 42,716 shareholders. Such shares were exchanged for shares of our common stock in January 2019 in the stock transfer.

Item 7.B. *Related Party Transactions*

We regularly engage in transactions with entities affiliated with the government, which currently owns 18.32% of our shares through the KDIC. Generally, these transactions include the extension of loans, the purchase of debt securities and other ordinary course activities relating to our banking business. For a description of such transactions, see Item 4.B. Business Overview Assets and Liabilities.

As of December 31, 2018, we also had loans outstanding to our executive officers and directors in the aggregate amount of 2,816 million.

All of these loans were made in the ordinary course of business, on substantially the same terms, including interest rates and collateral, as those prevailing at the time for comparable transactions with other persons and did not involve more than the normal risk of collectability or present other unfavorable features.

None of our directors or officers has or had any interest in any transactions effected by us that are or were unusual in their nature or conditions or significant to our business 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.

Item 7.C. *Interest of Experts and Counsel*

Not Applicable

Item 8. FINANCIAL INFORMATION

Item 8.A. *Consolidated Statements and Other Financial Information*

See Item 18. Financial Statements and pages F-1 through F-153.

Legal Proceedings

As a financial institution with diverse operations, we are subject to legal proceedings and regulatory actions in the ordinary course of our business.

Woori Bank

In November 2017, the Seoul Northern District Prosecutors Office commenced an investigation into alleged business interference in Woori Bank s hiring practices for new employees. According to the allegations made by the Seoul

Northern District Prosecutors Office, certain of Woori Bank s executive officers and other employees interfered with Woori Bank s business by unfairly giving favorable treatment to 37 individuals in connection with their hiring from 2015 to 2017. While there have been no formal charges or indictments against Woori Bank, six of its then-current and former employees were indicted in February 2018 in connection with such allegations. In January 2019, the Seoul Northern District Court sentenced such employees, including Woori Bank s former chief executive officer, to prison terms. The appeals regarding the sentences are currently ongoing.

In March 2018, AJ Energy filed a lawsuit against Woori Bank and Woori America Bank in the Supreme Court of the State of New York, seeking to recover an alleged transfer to Woori Bank from its foreign investors through an intermediary bank in the amount of EUR 8 billion. In June 2018, AJ Energy withdrew the lawsuit against Woori America Bank. The intermediary bank involved has informed Woori Bank that it has no evidence of the alleged transfer, and Woori Bank also has no records of such transfer and believes that the evidence presented by AJ Energy is forged. Woori Bank believes that the lawsuit is without merit and plans to respond proactively, including potentially through civil or criminal complaints against the plaintiff. Woori Bank expects that the court will dismiss the lawsuit in an expeditious manner.

Other than the legal proceedings discussed above, we and our subsidiaries are not a party to any legal or administrative proceedings, and no proceedings are known by us to be contemplated by governmental authorities or third parties, which, if adversely determined, may have a material adverse effect on our consolidated financial condition or results of operations.

Dividends

We declare our dividend annually at the annual general meeting of shareholders. We generally hold this meeting within three months after the end of each fiscal year. We must pay the annual dividend to the shareholders of record as of the end of the preceding fiscal year within one month after that meeting. We can distribute the annual dividend either in cash or in stock. Cash dividends may be paid out of retained earnings that have not been appropriated to statutory reserves. In addition, we may declare, and distribute in cash, interim dividends once a year pursuant to a board resolution.

The table below sets forth the dividend per share of common stock and the total amount of dividends declared by Woori Bank in respect of the years ended December 31, 2016, 2017 and 2018. Except as otherwise noted, the dividends set forth below with respect to each year were declared, paid and recorded in the following year.

Fiscal year	Dividends Per Share of Common Stock (in Won)	Total Amount Of Cash Dividends Paid (in millions of Won)
2016	400	269,308
2017(1)	600	403,963
2018	650	437,626

(1) Includes interim dividends of 100 per share of common stock declared and paid in August 2017.

Future dividends will depend upon our revenues, cash flow, financial condition and other factors. As an owner of ADSs, you will be entitled to receive dividends payable in respect of the shares of common stock represented by such ADSs.

For a description of the tax consequences of dividends paid to our shareholders, see Item 10.E. Taxation United States Taxation Dividends and Korean Taxation Taxation of Dividends on Common Shares or ADSs.

Item 8.B. ***Significant Changes***
Not Applicable

Item 9. THE OFFER AND LISTING

Item 9.A. *Offering and Listing Details*

Principal Markets

The principal trading market for our common stock is the KRX KOSPI Market. Our common stock has been listed on the KRX KOSPI Market under the identifying code 000030 since February 13, 2019, and the ADSs have been listed on the New York Stock Exchange under the symbol WF since January 11, 2019. The ADSs are identified by the CUSIP number 981064108.

Woori Finance Holdings common stock was listed on the KRX KOSPI Market on June 24, 2002, and was suspended from trading from October 30, 2014 and de-listed on November 18, 2014 following the merger of

Woori Finance Holdings with Woori Bank. Woori Finance Holdings ADSs were listed on the New York Stock Exchange since September 29, 2003 and were traded under the CUSIP number 981063100. Following the merger, Woori Bank s common stock was newly listed on the KRX KOSPI Market on November 19, 2014, and Woori Bank s ADSs succeeded to the listing of Woori Finance Holdings ADSs on the New York Stock Exchange on November 1, 2014. Woori Bank s ADSs were traded under the CUSIP number 98105T104.

In connection with our establishment in January 2019 as a new financial company pursuant to a comprehensive stock transfer under Korean law, Woori Bank s common stock was suspended from trading from January 9, 2019 and was de-listed from the KRX KOSPI Market on February 13, 2019. Following the stock transfer, our common stock was newly listed on the KRX KOSPI Market on February 13, 2019, and our ADSs succeeded to the listing of Woori Bank s ADSs on the New York Stock Exchange on January 11, 2019.

As of the date of this annual report, we have 680,164,306 shares of common stock outstanding.

Restrictions Applicable to ADSs

An investor does not need Korean governmental approval to sell or purchase our ADSs in the secondary market outside Korea or to withdraw shares of our common stock from our ADS deposit facility or deliver those withdrawn shares in Korea. However, a foreign investor who intends to acquire shares must obtain an investment registration card from the Financial Supervisory Service as described below. Either the foreign investor or its standing proxy in Korea must immediately report its acquisition of the shares to the governor of the Financial Supervisory Service.

Persons who acquire shares of our common stock by withdrawing those shares from our ADS deposit facility may exercise their preemptive rights for new shares, participate in free distributions and receive dividends on shares without any further Korean governmental approval.

Restrictions Applicable to Shares

As a result of amendments to the Foreign Exchange Transaction Laws and Financial Services Commission regulations (which we refer to collectively as the Investment Rules) adopted since January 1992 in connection with the opening and operation of Korea s stock market, foreign investors may generally invest, with limited exceptions and subject to procedural requirements, in all shares of Korean companies, whether listed on the KRX KOSPI Market or registered on the KRX KOSDAQ Market. Foreign investors may trade shares listed on the KRX KOSPI Market or registered on the KRX KOSDAQ Market only through the KRX KOSPI Market or the KRX KOSDAQ Market, except in limited circumstances. These circumstances include:

- odd-lot share trading;
- acquiring shares (which we refer to as Converted Shares) by exercising warrants, conversion rights or exchange rights under bonds with warrants, convertible bonds or exchangeable bonds or withdrawal rights under depositary receipts issued outside of Korea by a Korean company;
- acquiring shares through inheritance, donation, bequest or exercise of shareholders rights, including pre-emptive rights or rights to participate in free distributions and receive dividends;

subject to certain exceptions, over-the-counter transactions between foreign investors of a class of shares for which the limit on aggregate acquisition by foreign investors, as explained below, has been reached or exceeded; and

sale and purchase of shares at fair value between foreigners who are part of an investor group comprised of foreign companies investing under the control of a common investment manager pursuant to applicable laws or contract.

For over-the-counter transactions between foreign investors outside the KRX KOSPI Market or the KRX KOSDAQ Market involving a class of shares for which the limit on aggregate acquisition by foreign investors has been reached or exceeded, a financial investment company with a brokerage license in Korea must act as an intermediary. Odd-lot trading of shares outside the KRX KOSPI Market or the KRX KOSDAQ Market must involve a financial investment company with a dealing license in Korea as the other party. Foreign investors may not engage in margin transactions by borrowing shares from financial investment companies with a dealing and/or brokerage license with respect to shares that are subject to a foreign ownership limit.

The Investment Rules require a foreign investor who wishes to invest in shares on the KRX KOSPI Market or the KRX KOSDAQ Market (including Converted Shares and shares being issued for initial listing on the KRX KOSPI Market or registration on the KRX KOSDAQ Market) to register with the Financial Supervisory Service before making an investment. This registration requirement does not apply to foreign investors who acquire Converted Shares with the intention of selling the Converted Shares within three months from the acquisition date. The Financial Supervisory Service will issue an investment registration card to each registering foreign investor. This card must be presented each time the foreign investor opens a brokerage account with a financial investment company with a brokerage license. Foreign investors eligible to obtain an investment registration card include:

- foreign nationals who have not been residing in Korea for a consecutive period of six months or more;
- foreign governments;
- foreign municipal authorities;
- foreign public institutions;
- international financial institutions or similar international organizations;
- corporations incorporated under foreign laws; and
- any person in any additional category designated under the Enforcement Decree of the Financial Investment Services and Capital Markets Act.

All Korean offices of a foreign corporation (as a group) are treated as a separate foreign investor from the offices of the corporation outside Korea for these purposes. However, a foreign corporation or depositary issuing depositary receipts may obtain one or more investment registration cards in its name in certain circumstances identified in the relevant regulations.

When a foreign investor purchases shares through the KRX KOSPI Market or the KRX KOSDAQ Market, it need not make a separate report because the investment registration card system is designed to control and oversee foreign investment through a computer system. If, however, a foreign investor acquires or sells shares outside the KRX KOSPI Market or the KRX KOSDAQ Market, that investor or its standing proxy must report that transaction to the governor of the Financial Supervisory Service at that time. In addition, if a foreign investor acquires or sells its shares in connection with a tender offer, odd-lot trading of shares or trades of a class of shares for which the aggregate foreign ownership limit has been reached or exceeded, that investor or its standing proxy must ensure that the financial investment company engaged to facilitate the transaction reports the transaction to the governor of the Financial Supervisory Service. Also, sale and purchase of shares at fair value between foreigners who are part of an investor group comprised of foreign companies investing under the common control of a common investment manager pursuant to applicable laws or contract are required to be reported to the governor of the Financial Supervisory Service. A foreign investor may appoint a standing proxy to exercise shareholders rights or perform any matters related to the foregoing activities if that investor does not perform these activities itself. A foreign investor may be exempted from complying with the standing proxy rules with the approval of the governor of the Financial Supervisory Service in cases deemed unavoidable by reason of conflict between laws of Korea and the home country of the foreign investor.

Certificates evidencing shares of Korean companies must be kept in the custody of an eligible custodian in Korea. The same entities eligible to act as a standing proxy are eligible to act as a custodian of shares for a non-resident or foreign investor. A foreign investor must ensure that its custodian deposits its shares with the Korea Securities Depository. A foreign investor may be exempted from complying with this deposit requirement with the approval of the governor of the Financial Supervisory Service in circumstances where compliance with that requirement is made impracticable, including cases where compliance would contravene the laws of the foreign investors home country.

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Under the Investment Rules, with certain limitations, foreign investors may acquire shares of a Korean company without being subject to any foreign investment limit. Under one of these limitations, foreign investors may acquire no more than 40% of the outstanding share capital of designated public corporations. In addition, designated public corporations may set a limit on the acquisition of shares by a single person in their articles of incorporation. If a foreign investor acquires 10% or more of the outstanding shares with voting rights of a Korean company, that investment constitutes a foreign direct investment under the Foreign Investment Promotion Act of Korea. Generally, a foreign direct investment must be reported to the Ministry of Trade, Industry and Energy of Korea. The acquisition of a Korean company s shares by a foreign investor may be subject to certain foreign or other shareholding restrictions in the event that the restrictions are prescribed in a specific law that regulates the business of the Korean company. For a description of the restrictions applicable to Korean banks, see Principal Regulations Applicable to Banks.

Under the Foreign Exchange Transaction Laws, a foreign investor who intends to acquire shares must designate a foreign exchange bank at which he must open a foreign currency account and a Won account exclusively for stock investments. Approval is not required for remittance into Korea and deposit of foreign currency funds in the foreign currency account. Foreign currency funds may be transferred from the foreign currency account at the time required to place a deposit for, or settle the purchase price of, a stock purchase transaction to a Won account opened at a financial investment company with a dealing and/or brokerage license. Funds in the foreign currency account may be remitted abroad without any Korean governmental approval.

Dividends on shares of Korean companies are paid in Won. Korean governmental approval is not required for foreign investors to receive dividends on, or the Won proceeds from the sale of, any shares to be paid, received and retained in Korea. Dividends paid on, and the Won proceeds of the sale of, any shares held by a non-resident of Korea must be deposited either in a Won account with the investor s financial investment company with a dealing and/or brokerage license or in its own Won account. Funds in a foreign investor s Won account may be transferred to its foreign currency account or withdrawn for local living expenses up to certain limits. These funds may also be used to make future investments in shares or to pay the subscription price of new shares obtained through the exercise of pre-emptive rights.

Financial investment companies with a dealing or brokerage license may open foreign currency accounts with foreign exchange banks exclusively to accommodate foreign investors stock investments in Korea. Through these accounts, financial investment companies with a dealing or brokerage license may enter into limited foreign exchange transactions, such as converting foreign currency funds and Won funds, either as a counterparty to or on behalf of foreign investors, without the investors having to open their own accounts with foreign exchange banks.

Item 9.B. ***Plan of Distribution***
Not Applicable

Item 9.C. ***Markets***
See Item 9.A. Offering and Listing Details.

Item 9.D. ***Selling Shareholders***
Not Applicable

Item 9.E. ***Dilution***
Not Applicable

Item 9.F. ***Expenses of the Issuer***
Not Applicable

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Item 10. ADDITIONAL INFORMATION

Item 10.A. *Share Capital*

Not Applicable

Item 10.B. *Memorandum and Articles of Association*

Description of Capital Stock

We have set forth below information relating to our capital stock, including brief summaries of some of the provisions of our articles of incorporation, the Korean Commercial Code, Financial Investment Services and Capital Markets Act, and other related laws of Korea. These summaries do not purport to be complete and are subject to our articles of incorporation, and the applicable provisions of the Financial Investment Services and Capital Markets Act, the Korean Commercial Code and those related laws.

Our authorized share capital is 4,000,000,000 shares. Our articles of incorporation authorize us to issue:

- shares of common stock, par value 5,000 per share;
- class shares, par value 5,000 per share.

Subject to applicable laws and regulations, our articles of incorporation authorize us to issue a number of class shares equal to as much as one-half of all of the issued and outstanding shares.

As of the date of this annual report, 680,164,306 shares of common stock were issued and outstanding. Pursuant to our articles of incorporation, which became effective upon our establishment on January 11, 2019, we are authorized to issue various types of class shares, which include shares of voting and non-voting preferred stock, convertible stock, redeemable preferred stock and hybrid securities comprising one or more elements of the foregoing types of shares. There are no class shares currently outstanding. All of the issued and outstanding shares are fully paid and non-assessable and are in registered form. As of the date of this annual report, our authorized but unissued share capital was 3,319,835,694 shares. We may issue the unissued shares without further shareholder approval, but these issuances are subject to a board resolution as provided in the articles of incorporation. See Pre-emptive Rights and Issuances of Additional Shares and Dividends and Other Distributions Distribution of Free Shares. For a discussion of the history of our share capital, see Note 28 of the notes to our consolidated financial statements and Item 4.A. History and Development of the Company History Establishment of Woori Finance Holdings, Merger of Woori Bank and Woori Finance Holdings and Privatization Plan Establishment of Woori Financial Group.

Our articles of incorporation allow our shareholders, by special resolution, to grant to our officers, directors and employees stock options exercisable for up to 15% of the total number of our issued and outstanding shares. Our board of directors may also grant stock options exercisable for up to 1% of our issued and outstanding shares. However, any grant by our board of directors must be approved by our shareholders at their next general meeting convened immediately after the grant date. As of the date of this annual report, our officers, directors and employees do not hold any options to purchase shares of common stock. See Item 6.E. Share Ownership.

We issue share certificates in denominations of one, five, ten, 50, 100, 500, 1,000 and 10,000 shares.

Organization

We are a financial holding company established under the Financial Holding Company Act. We are registered with the commercial registry office of Seoul District Court.

Interests of Directors

Our articles of incorporation provide that any director who has a material interest in the subject matter of a resolution to be taken by the board of directors cannot vote on such resolution. Our articles of incorporation also provide that the remuneration of our directors is to be determined by the resolution of the general meeting of shareholders.

Our articles of incorporation do not contain any special provisions with respect to the borrowing powers exercisable by directors, their retirement age or a requirement to hold any shares of our capital stock.

See Item 6.C. Board Practices for more information on our directors.

Limitation on Liability of Directors

Our articles of incorporation provide that we may, upon the resolution of the general meeting of shareholders, limit the liability of our directors (in their capacity as such) to an amount not less than six times (or three times in case of outside directors) the aggregate amount of the remuneration we paid to such directors during the most recent one-year period, provided that such limitation shall not apply with regard to any liability arising from such directors gross negligence, willful misconduct or violation of their duties regarding self-dealing or corporate opportunity.

Dividends and Other Distributions

Dividends. We distribute dividends to shareholders in proportion to the number of shares of the relevant class of capital stock they own. Subject to the requirements of the Korean Commercial Code and other applicable laws and regulations, we expect to pay full annual dividends on newly issued stock for the year in which it is issued.

We declare our dividend annually at the annual general meeting of shareholders. We generally hold this meeting within three months after the end of each fiscal year. We must pay the annual dividend to the shareholders of record as of the end of the preceding fiscal year within one month after that meeting. We can distribute the annual dividend in (i) cash, (ii) shares, provided that such shares must be distributed at par value and, if the market price of the shares is less than their par value, dividends in shares may not exceed one-half of the total annual dividend (including dividends in shares) or (iii) other forms of consideration. In addition, we may declare, and distribute in cash, interim dividends once a year pursuant to a board resolution.

Under the Korean Commercial Code and our articles of incorporation, we do not have an obligation to pay any annual or interim dividend unclaimed for five years from the payment date.

The Financial Holding Company Act and related regulations require that each time a Korean financial holding company pays an annual dividend, it must set aside in its legal reserve to stated capital an amount equal to at least one-tenth of its net income after tax until the amount set aside reaches at least the aggregate amount of its stated capital. Unless it sets aside this amount, a Korean financial holding company may not pay an annual dividend. We intend to set aside allowances for loan losses and reserves for severance pay in addition to this legal reserve.

For information regarding taxation of dividends, see Item 10.E. Taxation United States Taxation Dividends and Korean Taxation Taxation of Dividends on Common Shares or ADSs.

Distribution of Free Shares. The Korean Commercial Code permits us to pay dividends in the form of shares out of retained or current earnings. It also permits us to distribute to our shareholders, in the form of free shares, an amount transferred from the capital surplus or legal reserve. We would be required to distribute those free shares pro rata to all shareholders.

Pre-emptive Rights and Issuances of Additional Shares

We may issue authorized but unissued shares as our board of directors may determine, unless otherwise provided in the Korean Commercial Code. We must, however, offer any new shares on uniform terms to all shareholders who have preemptive rights and are listed on our shareholders register as of the applicable record date. Those shareholders are entitled to subscribe for any newly issued shares in proportion to their existing shareholdings. Our articles of incorporation provide, however, that we may issue new shares to persons other than existing shareholders if those shares are:

- publicly offered pursuant to Article 165-6 of the Financial Investment Services and Capital Markets Act (where the number of shares so offered may not exceed 50% of our total number of issued shares);

- issued to directors or employees as a result of the exercise of stock options we granted to them pursuant to Article 542-3 of the Korean Commercial Code;

- issued to the members of our employee stock ownership association pursuant to Article 165-7 of the Financial Investment Services and Capital Markets Act;

- issued to specified foreign investors or foreign or domestic financial institutions for managerial needs, strategic technology alliances, emergency financing or debt-to-equity swaps by those financial institutions (where the number of shares so offered may not exceed 50% of our total number of issued shares); or

- issued to a depositary for the purpose of issuing depositary receipts pursuant to Financial Investment Services and Capital Markets Act (where the number of shares so offered may not exceed 50% of our total number of issued shares).

We must give public notice of pre-emptive rights for new shares and their transferability not less than two weeks before the record date (excluding the period during which the shareholders register is closed). We will notify the shareholders who are entitled to subscribe for newly issued shares of the deadline for subscription at least two weeks prior to the deadline. If a shareholder fails to subscribe on or before the deadline, its pre-emptive rights will lapse. Our board of directors may determine how to distribute shares in respect of which preemptive rights have not been exercised or where fractions of shares occur.

Under the Financial Investment Services and Capital Markets Act, each member of our employee stock ownership association, whether or not they are shareholders, has a preemptive right, subject to certain exceptions, to subscribe for up to 20% of any shares we publicly offer. This right is exercisable only so long as the total number of shares so acquired and held by the member does not exceed 20% of the total number of shares then outstanding. As of December 31, 2018, Woori Bank s employees owned 6.05% of its common stock through its employee stock ownership association which was replaced by our employee stock ownership association upon our establishment in January 2019.

In addition, our articles of incorporation permit us to issue convertible bonds or bonds with warrants, each up to an aggregate principal amount of 1 trillion, to persons other than existing shareholders. Under the Korean Commercial Code, we are permitted to distribute convertible bonds or bonds with warrants to persons other than existing shareholders only when we deem that this distribution is necessary for managerial purposes, such as obtaining new technology or improving our financial condition. In the event we issue new shares, the foregoing provision would be applicable notwithstanding any provision in the articles of incorporation allowing issuance of new shares to persons other than existing shareholders. As of the date of this annual report, we have no convertible bonds or bonds with warrants outstanding.

Voting Rights

Each outstanding share of our common stock is entitled to one vote per share. However, voting rights with respect to shares of common stock that we hold or any of our subsidiaries holds may not be exercised. Unless stated otherwise in a company s articles of incorporation, the Korean Commercial Code permits holders of an aggregate of 1% or more of the issued and outstanding shares with voting rights to request cumulative voting when electing two or more directors. Our articles of incorporation do not prohibit cumulative voting.

The Korean Commercial Code and our articles of incorporation provide that an ordinary resolution may be adopted if approval is obtained from the holders of at least a majority of those shares of common stock present or represented at a meeting and such majority also represents at least one-fourth of the total of our issued and outstanding voting shares. Holders of non-voting shares (other than enfranchised non-voting shares) will not be entitled to vote on any resolution or to receive notice of any general meeting of shareholders, unless the agenda of the meeting includes consideration of a resolution on which such holders are entitled to vote. The Korean Commercial Code provides that a company s articles of incorporation may prescribe conditions for the enfranchisement of non-voting shares. For example, if our annual general shareholders meeting resolves not to pay to holders of non-voting shares with preferred dividend the annual dividend as determined by the board of directors at the time of issuance of such shares, the holders of non-voting shares with preferred dividend will be entitled to exercise voting rights from the general shareholders meeting following the meeting adopting such resolution to the end of a meeting to declare to pay such dividend with respect to the non-voting shares with preferred dividend. Holders of such enfranchised non-voting shares with preferred dividend will have the same rights as holders of common stock to request, receive notice of, attend and vote at a general meeting of shareholders.

The Korean Commercial Code provides that to amend the articles of incorporation, which is also required for any change to the authorized share capital of a company, and in certain other instances, including removal of a director of a company, dissolution, merger or consolidation of a company, transfer of the whole or a significant part of the business of a company, acquisition of all of the business of any other company, acquisition of a part of the business of any other company having a material effect on the business of the company or issuance of new shares at a price lower than their par value, a special resolution must be adopted by the approval of the holders of at least two-thirds of those shares present or represented at a meeting and such special majority must represent at least one-third of the total issued and outstanding shares with voting rights of the company.

In addition, in the case of amendments to the articles of incorporation or any merger or consolidation of a company or in certain other cases, where the rights or interest of the holders of class shares are adversely affected, a resolution must be adopted by a separate meeting of holders of class shares. Such a resolution may be adopted if the approval is obtained from shareholders of at least two-thirds of the class shares present or represented at such meeting and such shares also represent at least one-third of the total issued and outstanding class shares.

A shareholder may exercise his voting rights by proxy given to another person. The proxy must present the power of attorney prior to the start of a meeting of shareholders.

Liquidation Rights

If we are liquidated, the assets remaining after the payment of all our debts, liquidation expenses and taxes will be distributed to the shareholders in proportion to the number of shares held by them. Holders of class shares have no preferences in liquidation.

General Meetings of Shareholders

There are two types of general meetings of shareholders: (1) annual general meetings and (2) extraordinary general meetings. We are required to convene our annual general meeting within three months after the end of each fiscal year. Subject to a board resolution or court approval, an extraordinary general meeting of shareholders may be held when necessary or at the request of the holders of an aggregate of 3% or more of our outstanding shares, or the holders of an aggregate of 1.5% or more of our outstanding stock with voting rights, who have held those shares for at least six months, under the Act on the Corporate Governance of Financial Companies and its sub-regulations.

Under the Korean Commercial Code, an extraordinary general meeting of shareholders may also be convened at the request of our audit committee, subject to a board resolution or court approval. Holders of non-voting shares may be entitled to request a general meeting of shareholders only to the extent the non-voting shares have become enfranchised as described under the section entitled Voting Rights above, hereinafter referred to as enfranchised non-voting shares. Meeting agendas will be determined by the board of directors or proposed by holders of an aggregate of 3% or more of the outstanding shares with voting rights or by holders of an aggregate of 0.1% or more of our issued and outstanding shares with voting rights, who have held those shares for at least six months, by way of a written proposal to the board of directors at least six weeks prior to the meeting, under the Act on the Corporate Governance of Financial Companies and its sub-regulations. Written notices or e-mail notices stating the date, place and agenda of the meeting must be given to the shareholders at least two weeks prior to the date of the general meeting of shareholders. Notice may, however, be given to holders of 1% or less of the total number of issued and outstanding shares which are entitled to vote, either by placing at least two public notices at least two weeks in advance of the meeting in at least two daily newspapers or by placing a notice through the electronic disclosure system operated by the Financial Supervisory Service or the Korea Exchange. Shareholders who are not on the shareholders register as of the record date will not be entitled to receive notice of the general meeting of shareholders, and they will not be entitled to attend or vote at such meeting. Holders of enfranchised non-voting shares who are on the shareholders register as of the record date will be entitled to receive notice of the general meeting of shareholders and they will be entitled to attend and vote at such meeting. Otherwise, holders of non-voting shares will not be entitled to receive notice of or vote at general meetings of shareholders.

The general meeting of shareholders will be held at our head office, which is our registered head office, or, if necessary, may be held anywhere in the vicinity of our head office.

Rights of Dissenting Shareholders

Pursuant to the Financial Investment Services and Capital Markets Act and the Act on the Improvement of the Structure of the Financial Industry, in certain limited circumstances (including, without limitation, if we transfer all or any significant part of our business, if we acquire a part of the business of any other company and such acquisition has a material effect on our business, or if we merge or consolidate with another company), dissenting holders of shares of our common stock and our stock with preferred dividends will have the right to require us to purchase their shares. To exercise such a right, shareholders must submit to us a written notice of their dissent by the day prior to the general meeting of shareholders. Within 20 days (10 days in the case of a stock transfer or exchange to establish a financial holding company or to own all issued shares of a subsidiary under the Financial Holding Company Act) after the date on which the relevant resolution is passed at such meeting, such dissenting shareholders must request in writing that we purchase their shares. We are obligated to purchase the shares from dissenting shareholders within one month after the end of such request period at a price to be determined by negotiation between us and the shareholder. If we cannot agree on a price with the shareholder through such negotiations, the purchase price will be the arithmetic mean of (x) the weighted average of the closing share prices on the KRX KOSPI Market for the two-month period prior to the date of the adoption of the relevant board of directors resolution, (y) the weighted average of the closing share prices on the KRX KOSPI Market for the one-month period prior to the date of the adoption of the relevant board of directors resolution and (z) the weighted average of the closing share prices on the KRX KOSPI Market for the one-week period prior to the date of the adoption of the relevant board of directors resolution. However, any dissenting shareholder who wishes to contest the purchase price may bring a claim in court.

Required Disclosure of Ownership

Any person who directly or beneficially owns shares of our common stock that have voting rights, whether in the form of shares, ADSs, certificates representing the rights to subscribe for shares or equity-related debt securities (including convertible bonds and bonds with warrants) (which we refer to collectively as Equity Securities) that, when taken together with the Equity Securities beneficially owned by specified related persons or by any person acting in concert with that person, account for 5% or more of our total issued and outstanding shares (plus the Equity Securities other than the shares held by such persons and treasury stock) must report that holding to the Financial Services Commission and the KRX KOSPI Market no more than five business days after reaching 5%. That person must also report any subsequent change in the ownership interest of 1% or more of our total outstanding shares (plus the Equity Securities other than the shares held by such persons) to the same entities no more than five business days after the change.

Anyone violating these reporting requirements may suffer criminal sanctions, including fines, imprisonment, an administrative fine of up to 0.001% of the aggregate market value of total issued and outstanding stock of 500 million, whichever is lower, and/or a loss of voting rights with respect to the ownership of Equity Securities exceeding 5% of the total issued and outstanding Equity Securities with respect to which the reporting requirements were violated. Furthermore, the Financial Services Commission may order that person to dispose of the unreported Equity Securities.

In addition to the reporting requirements described above, any person whose direct or beneficial ownership of our stock accounts for 10% or more of the total issued and outstanding stock (which we refer to as a major shareholder) must report the status of its shareholding to the Korea Securities Futures Commission and the KRX KOSPI Market within five days after becoming a major shareholder. Also, the major shareholder must report any subsequent change in its ownership interest to those same entities within five days of the occurrence of the change, unless the change in the number of shares is less than 1,000 shares and the amount involved in such change is less than 10 million. A major shareholder that violates these reporting requirements may suffer criminal sanctions, including fines or imprisonment.

Other Provisions

Record Date. The record date for annual dividends is December 31. For the purpose of determining the holders of shares entitled to annual dividends, the register of shareholders will be closed for the period beginning from January 1 and ending on January 31. Further, the Korean Commercial Code and our articles of incorporation permit us, upon at least two weeks public notice, to set a record date and/or close the register of shareholders for not more than three months for the purpose of determining the shareholders entitled to certain rights pertaining to the shares. However, in the event that the register of shareholders is closed for the period beginning from January 1 and ending on January 31 for the purpose of determining the holders of shares entitled to attend the annual general meeting of shareholders, the Korean Commercial Code waives the requirement to provide at least two weeks public notice. The trading of shares and the delivery of certificates in respect thereof may continue while the register of shareholders is closed.

Annual and Interim Reports. At least one week before the annual general meeting of shareholders, we must make our annual report and audited financial statements available for inspection at our head office and at all of our branch offices. Copies of this report, the audited financial statements and any resolutions adopted at the general meeting of shareholders are available to our shareholders.

Under the Financial Investment Services and Capital Markets Act, we must file with the Financial Services Commission and the KRX KOSPI Market an annual business report within 90 days after the end of each fiscal year, a half-year business report within 45 days after the end of the first six months of each fiscal year and quarterly business reports within 45 days after the end of the first three months and nine months of each fiscal year. Copies of such business reports will be available for public inspection at the Financial Services Commission and the KRX KOSPI Market.

Transfer of Shares. Under the Korean Commercial Code, the transfer of shares is effected by the delivery of share certificates. The Financial Investment Services and Capital Markets Act provides, however, that in case of a company listed on the KRX KOSPI Market such as us, share transfers can be effected by the book-entry method. In order to assert shareholders rights against us, the transferee must have his name and address registered on the register of shareholders. For this purpose, shareholders are required to file with us their name, address and seal. Non-resident shareholders must notify us of the name of their proxy in Korea to which notices can be sent.

Under current Korean regulations, the Korea Securities Depository, internationally recognized foreign custodians, financial investment companies with a dealing license (including domestic branches of foreign financial investment companies with such license), financial investment companies with a brokerage license (including domestic branches of foreign financial investment companies with such license), foreign exchange banks (including domestic branches of foreign banks) and financial investment companies with a collective investment license (including domestic branches of foreign financial investment companies with such license) may act as agents and provide related services for foreign shareholders.

In addition, foreign shareholders may appoint a standing proxy among the foregoing and generally may not allow any person other than the standing proxy to exercise rights to the acquired shares or perform any tasks related thereto on their behalf. Certain foreign exchange controls and securities regulations apply to the transfer of shares by non-residents or non-Koreans. See Item 9.A. Offering and Listing Details and Item 10.D. Exchange Controls. Except as provided in the Financial Holding Company Act, the ceiling on the aggregate shareholdings of a single shareholder and persons who stand in a special relationship with such shareholder is 10% of our issued and outstanding voting shares. See Item 4.B. Business Overview Supervision and

Regulation Principal Regulations Applicable to Financial Holding Companies Restrictions on Ownership of a Financial Holding Company.

Our Acquisition of Our Shares. Under the Korean Commercial Code, we may acquire our own shares upon a resolution of a general meeting of shareholders by either (i) purchasing them on a stock exchange or (ii) purchasing a number of shares, other than redeemable shares as set forth in Article 345, Paragraph (1) of the Korean Commercial Code, from each shareholder in proportion to their existing shareholding ratio through the methods set forth in the Presidential Decree, provided that the total purchase price does not exceed the amount of our profit that may be distributed as dividends in respect of the immediately preceding fiscal year.

Additionally, pursuant to the Financial Investment Services and Capital Markets Act and regulations under the Financial Holding Company Act and after submission of certain reports to the Financial Services Commission, we may purchase our own shares on the KRX KOSPI Market or through a tender offer, subject to the restrictions that (i) the aggregate purchase price of such shares may not exceed the total amount available for distribution of dividends at the end of the preceding fiscal year; and (ii) the purchase of such shares shall meet the risk-weighted capital adequacy ratio requirements prescribed in the regulations under the Financial Holding Company Act based on Bank for International Settlements standards.

Subject to certain limited exceptions, our subsidiaries will not be permitted to acquire our shares pursuant to the Financial Holding Company Act.

Item 10.C. ***Material Contracts***

In December 2016, in connection with the KDIC s sale of shares of Woori Bank s common stock, Woori Bank entered into an agreement with the KDIC, which we refer to as the KDIC Agreement. Pursuant to the KDIC Agreement, Woori Bank was required to use our best efforts to cause an employee of the KDIC nominated by it to be appointed as one of Woori Bank s non-standing directors, so long as the KDIC either (x) owned 10% or more of Woori Bank s total issued shares with voting rights or (y) owned more than 4% but less than 10% of Woori Bank s total issued shares with voting rights and remained its largest shareholder (other than the National Pension Service of Korea). In addition, pursuant to the KDIC Agreement, Woori Bank was required to use its best efforts to cause such non-standing director nominated by the KDIC to be appointed as a member of the Compensation Committee under Woori Bank s board of directors, so long as the KDIC owned 10% or more of Woori Bank s total issued shares with voting rights. Furthermore, so long as the KDIC owned 4% or more of Woori Bank s total issued shares with voting rights, the KDIC Agreement required Woori Bank to provide certain information in advance to the KDIC, including the agenda and minutes for meetings of Woori Bank s board of directors, information regarding its retained earnings available for distribution of dividends, and information regarding matters that could have a material effect on the KDIC s remaining share ownership interest in Woori Bank, such as capital increases or decreases, its conversion to a holding company structure, changes in its corporate governance, changes in the lines of business of its subsidiaries and material dispositions or acquisitions of assets. The KDIC Agreement provided that it would automatically terminate if the KDIC ceased to own 4% or more of Woori Bank s total issued shares with voting rights. While the KDIC Agreement has expired, we expect to enter into an agreement with similar terms with the KDIC in the first half of 2019.

Item 10.D. ***Exchange Controls***

General

The Foreign Exchange Transaction Act of Korea and the Enforcement Decree and regulations under that Act regulate investment in Korean securities by non-residents and issuance of securities outside Korea by Korean companies. We collectively refer to these laws and regulations as the Foreign Exchange Transaction Laws. Non-residents may invest in Korean securities only to the extent specifically allowed by the Foreign Exchange Transaction Laws or otherwise permitted by the Ministry of Economy and Finance. The Financial Services Commission has also adopted regulations that restrict foreign investment in Korean securities and regulate the issuance of securities outside Korea by Korean companies, pursuant to its authority under the Financial Investment Services and Capital Markets Act.

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Under the Foreign Exchange Transaction Laws, if the Korean government deems that:

- the need to do so is inevitable due to the outbreak of natural calamities, wars, conflict of arms or grave and sudden changes in domestic or foreign economic circumstances or other similar situations, the Ministry of Economy and Finance may temporarily suspend payment, receipt or the whole or part of transactions to which the Foreign Exchange Transaction Laws apply, or impose an obligation to safe-keep, deposit or sell means of payment in or to certain Korean governmental agencies or financial institutions; and

- international balance of payments and international finance are confronted or are likely to be confronted with serious difficulty or the movement of capital between Korea and abroad brings or is likely to bring about serious obstacles in carrying out its currency policies, exchange rate policies and other macroeconomic policies, the Ministry of Economy and Finance may take measures to require any person who intends to perform capital transactions to obtain permission or to require any person who performs capital transactions to deposit part of the payments received in these transactions at certain Korean governmental agencies or financial institutions.

Both of these actions are subject to limitations specified by the Foreign Exchange Transaction Laws.

Restrictions Applicable to Shares

Under the Foreign Exchange Transaction Laws, a foreign investor who intends to acquire shares must designate a foreign exchange bank at which he or she must open a foreign currency account and a Won account exclusively for stock investments. Approval is not required for remittance into Korea and deposit of foreign currency funds in the foreign currency account. Foreign currency funds may be transferred from the foreign currency account at the time required to place a deposit for, or settle the purchase price of, a stock purchase transaction to a Won account opened at a financial investment company with a dealing and/or brokerage license. Funds in the foreign currency account may be remitted abroad without any Korean governmental approval.

Dividends on shares of Korean companies are paid in Won. Korean governmental approval is not required for foreign investors to receive dividends on, or the Won proceeds from the sale of, any shares to be paid, received and retained in Korea. Dividends paid on, and the Won proceeds of the sale of, any shares held by a non-resident of Korea must be deposited either in a Won account with the investor s financial investment company with a dealing and/or brokerage license or in its own Won account. Funds in a foreign investor s Won account may be transferred to its foreign currency account or withdrawn for local living expenses up to certain limits. These funds may also be used to make future investments in shares or to pay the subscription price of new shares obtained through the exercise of pre-emptive rights.

Financial investment companies with a dealing and/or brokerage license may open foreign currency accounts with foreign exchange banks exclusively to accommodate foreign investors stock investments in Korea. Through these accounts, such financial investment companies may enter into limited foreign exchange transactions, such as converting foreign currency funds and Won funds, either as a counterparty to or on behalf of foreign investors, without the investors having to open their own accounts with foreign exchange banks.

Item 10.E. ***Taxation***

The following summary is based upon tax laws, regulations, rulings, decrees, income tax conventions (treaties), administrative practice and judicial decisions of Korea and the United States as of the date of this annual report, and is subject to any change in the laws of Korea or the United States that may come into effect after such date.

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United States Taxation

This summary describes certain material U.S. federal income tax consequences for a U.S. holder (as defined below) of acquiring, owning, and disposing of common shares or ADSs. This summary applies to you only if you hold the common shares or ADSs as capital assets for tax purposes. This summary does not apply to you if you are a member of a class of holders subject to special rules, such as:

- a dealer in securities or currencies;
- a trader in securities that elects to use a mark-to-market method of accounting for securities holdings;
- a bank or financial institution;
- a life insurance company;
- a tax-exempt organization;
- an entity treated as a partnership or other passthrough entity (or investors therein) for U.S. federal income tax purposes;
- a person that holds common shares or ADSs that are a hedge or that are hedged against interest rate or currency risks;
- a person that holds common shares or ADSs as part of a straddle or conversion transaction for tax purposes;
- a person whose functional currency for tax purposes is not the U.S. dollar; or
- a person that owns or is deemed to own 10% or more of our stock, measured by voting power or value.

In addition, this summary does not discuss the application of the U.S. federal estate and gift taxes, the Medicare net investment income tax or the alternative minimum tax, or any state, local or other tax consequences of purchasing, owning, and disposing of common shares or ADSs. You should consult your own tax advisers concerning the U.S. federal, state, local, and other tax consequences of purchasing, owning, and disposing of common shares or ADSs in your particular circumstances.

This summary is based on the Internal Revenue Code of 1986, as amended, its legislative history, existing and proposed regulations promulgated thereunder, and published rulings and court decisions, all as currently in effect. These laws are subject to change, possibly on a retroactive basis.

For purposes of this summary, you are a U.S. holder if you are the beneficial owner of a common share or an ADS and are:

- a citizen or resident of the United States;
- a U.S. domestic corporation; or
- otherwise subject to U.S. federal income tax on a net income basis with respect to income from the common share or ADS.

In general, if you are the beneficial owner of ADSs, you will be treated as the beneficial owner of the common shares represented by those ADSs for U.S. federal income tax purposes, and no gain or loss will be recognized if you exchange an ADS for the common share represented by that ADS.

Dividends

The gross amount of cash dividends that you receive (prior to deduction of Korean taxes) generally will be subject to U.S. federal income taxation as foreign source dividend income and will not be eligible for the dividends received deduction. Dividends paid in Won will be included in your income in a U.S. dollar amount calculated by reference to the exchange rate in effect on the date that you receive the dividend (or the depositary receives the dividend, in the case of ADSs), regardless of whether the payment is in fact converted into U.S. dollars. If such a dividend is converted into U.S. dollars on the date of receipt, you generally should not be required to recognize foreign currency gain or loss in respect of the dividend income.

Subject to certain exceptions for short-term and hedged positions, the U.S. dollar amount of dividends received by an individual with respect to our common shares or ADSs will be subject to taxation at reduced rates if the dividends are qualified dividends. Dividends paid on the common shares or ADSs will be treated as qualified dividends if (i) the common shares or ADSs are readily tradable on an established securities market in the United States or we are eligible for the benefits of a comprehensive tax treaty with the United States that the U.S. Treasury determines is satisfactory for purposes of this provision and that includes an exchange of information program; and (ii) we were not, in the year prior to the year in which the dividend was paid, and are not, in the year in which the dividend is paid, a passive foreign investment company as defined for U.S. federal income tax purposes, which we refer to as a PFIC. The ADSs are listed on the New York Stock Exchange, and will qualify as readily tradable on an established securities market in the United States so long as they are so listed. In addition, the U.S. Treasury has determined that the Korea-United States income tax treaty meets the requirements for reduced rates of taxation, and we believe we are eligible for the benefits of that treaty. Based on our audited financial statements, we believe that we were not a PFIC in our 2018 taxable year. In addition, based on our current expectations regarding our income, assets and activities, we do not anticipate becoming a PFIC for our 2019 taxable year. Therefore, we believe that dividends received by U.S. holders with respect to either common shares or ADSs will be qualified dividends. Holders should consult their own tax advisers regarding the availability of the reduced dividend tax rate in light of their own particular circumstances.

Distributions of additional shares in respect of common shares or ADSs that are made as part of a pro-rata distribution to all of our shareholders generally will not be subject to U.S. federal income tax.

Sale or Other Disposition

For U.S. federal income tax purposes, gain or loss you realize on a sale or other disposition of common shares or ADSs generally will be treated as U.S. source capital gain or loss, and will be long-term capital gain or loss if the common shares or ADSs were held for more than one year. Your ability to offset capital losses against ordinary income is limited. Long-term capital gain recognized by an individual U.S. holder generally is subject to taxation at reduced rates.

If a U.S. holder sells or otherwise disposes of our common shares or ADSs in exchange for currency other than U.S. dollars, the amount realized generally will be the U.S. dollar value of the currency received at the spot rate on the date of sale or other disposition (or, if the shares are traded on an established securities market at such time, in the case of cash basis and electing accrual basis U.S. holders, the settlement date). An accrual basis U.S. holder that does not elect to determine the amount realized using the spot exchange rate on the settlement date will recognize foreign currency gain or loss equal to the difference between the U.S. dollar value of the amount received based on the spot exchange rates in effect on the date of the sale or other disposition and the settlement date. If an accrual basis U.S. holder makes the election described in the first sentence of this paragraph, it must be applied consistently from year to year and cannot be revoked without the consent of the Internal Revenue Service. A U.S. holder should consult its own tax advisors regarding the treatment of any foreign currency gain or loss realized with respect to any currency received in a sale or other disposition of the common shares or ADSs.

Foreign Tax Credit Considerations

You should consult your own tax advisers to determine whether you are subject to any special rules that limit your ability to make effective use of foreign tax credits. If no such rules apply, you may claim a credit against your U.S. federal income tax liability for Korean taxes withheld from dividends on the common shares or ADSs at the rate provided for under the income tax treaty between the United States and Korea, so long as you have owned the common shares or ADSs (and not entered into specified kinds of hedging transactions) for at least a 16-day period that includes the ex-dividend date. Instead of claiming a credit, you may, if you so elect, deduct such Korean taxes in computing your taxable income, subject to generally applicable limitations under U.S. tax law. Korean taxes withheld from a distribution of additional shares that is not subject to U.S. tax may be treated for U.S. federal income tax purposes as imposed on general category income. Such treatment could affect your ability to utilize any available foreign tax credit in respect of such taxes.

Any Korean securities transaction tax or agriculture and fishery special surtax that you pay will not be creditable for foreign tax credit purposes.

Similarly, a U.S. holder will not be able to claim a foreign tax credit against its U.S. federal income tax liability for any Korean inheritance or gift tax imposed in respect of the common shares or ADSs.

Foreign tax credits will not be allowed for withholding taxes imposed in respect of certain short-term or hedged positions in securities and may not be allowed in respect of arrangements in which a U.S. holder s expected economic profit is insubstantial.

The calculation of foreign tax credits and, in the case of a U.S. holder that elects to deduct foreign taxes, the availability of deductions involve the application of complex rules that depend on a U.S. holder s particular circumstances. You should consult your own tax advisers regarding the creditability or deductibility of such taxes.

Specified Foreign Financial Assets

Certain U.S. holders that own specified foreign financial assets with an aggregate value in excess of 50,000 U.S. dollars are generally required to file an information statement along with their tax returns, currently on Form 8938, with respect to such assets. Specified foreign financial assets include any financial accounts held at a non-U.S. financial institution, as well as securities issued by a non-U.S. issuer (which would include the common shares and ADSs) that are not held in accounts maintained by financial institutions. Higher reporting thresholds apply to certain individuals living abroad and to certain married individuals. Regulations extend this reporting requirement to certain entities that are treated as formed or availed of to hold direct or indirect interests in specified foreign financial assets based on certain objective criteria. U.S. holders who fail to report the required information could be subject to substantial penalties. In addition, the statute of limitations for assessment of tax would be suspended, in whole or part. Prospective investors should consult their own tax advisors concerning the application of these rules to their investment in the common shares or ADSs, including the application of the rules to their particular circumstances.

U.S. Information Reporting and Backup Withholding Rules

Payments of dividends and sales proceeds that are made within the United States or through certain U.S.-related financial intermediaries are subject to information reporting and may be subject to backup withholding unless the holder (i) is a corporation or other exempt recipient and demonstrates this when required or (ii) provides a taxpayer identification number and certifies that no loss of exemption from backup withholding has occurred. Holders that are not U.S. persons generally are not subject to information reporting or backup withholding. However, such a holder may be required to provide a certification of its non-U.S. status in connection with payments received within the United States or through a U.S.-related financial intermediary.

Korean Taxation

The following summary of Korean tax considerations applies to you so long as you are not:

- a resident of Korea;

- a corporation with its head office, principal place of business or place of effective management in Korea; or engaged in a trade or business in Korea through a permanent establishment or a fixed base to which the relevant income is attributable or with which the relevant income is effectively connected.

Please consult your own tax advisers as to the Korean, state, local and other tax consequences of the purchase, ownership and disposition of common shares.

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Taxation of Dividends on Common Shares or ADSs

We will deduct Korean withholding tax from dividends paid to you (whether payable in cash or in shares) at a rate of 22.0% (inclusive of local income surtax). If you are a qualified resident and a beneficial owner of the dividends in a country that has entered into a tax treaty with Korea, you may qualify for a reduced rate of Korean withholding tax. See Tax Treaties below for a discussion on treaty benefits. If we distribute to you free shares representing a transfer of earning surplus or certain capital reserves into paid-in capital, that distribution may be subject to Korean withholding tax.

Taxation of Capital Gains from Transfer of Common Shares or ADSs

As a general rule, capital gains earned by non-residents upon transfer of our common shares or ADSs are subject to Korean withholding tax at the lower of (1) 11.0% (inclusive of local income surtax) of the gross proceeds realized or (2) subject to the production of satisfactory evidence of acquisition costs and certain direct transaction costs of the common shares or ADSs, 22.0% (inclusive of local income surtax) of the net realized gain, unless exempt from Korean income taxation under the applicable Korean tax treaty with the non-resident s country of tax residence. See Tax Treaties below for a discussion on treaty benefits. Even if you do not qualify for an exemption under a tax treaty, you will not be subject to the foregoing withholding tax on capital gains if you qualify under the relevant Korean domestic tax law exemptions discussed in the following paragraphs.

In regard to the transfer of our common shares through the Korea Exchange, you will not be subject to the withholding tax on capital gains (as described in the preceding paragraph) if you (1) have no permanent establishment in Korea and (2) did not own or have not owned (together with any shares owned by any person with which you have a certain special relationship) 25% or more of the total issued and outstanding shares, which may include the common shares represented by the ADSs, at any time during the calendar year in which the sale occurs and during the five consecutive calendar years prior to the calendar year in which the sale occurs.

Under Korean tax law, ADSs are viewed as shares of common stock for capital gains tax purposes. Accordingly, capital gains from the sale or disposition of ADSs are taxed (if such sale or disposition constitutes a taxable event) as if such gains are from the sale or disposition of the underlying common shares. Capital gains that you earn (regardless of whether you have a permanent establishment in Korea) from a transfer of ADSs outside of Korea will generally be exempt from Korean income taxation by virtue of the Special Tax Treatment Control Law of Korea, or the STTCL, provided that the issuance of the ADSs is deemed to be an overseas issuance under the STTCL. However, if you transfer ADSs after having converted the underlying common shares, such exemption under the STTCL will not apply and you will be required to file a corporate income tax return and pay tax in Korea with respect to any capital gains derived from such transfer unless the purchaser or a financial investment company with a brokerage license, as applicable, withholds and pays such tax.

If you are subject to tax on capital gains with respect to the sale of ADSs, or of our common shares you acquired as a result of a withdrawal, the purchaser or, in the case of the sale of the common shares on the Korea Exchange or through a financial investment company with a brokerage license in Korea, such financial investment company, is required to withhold Korean tax on capital gain from the sales price in an amount equal to the lower of (1) 11.0% (inclusive of local income surtax) of the gross realization proceeds or (2) subject to the production of satisfactory evidence of acquisition costs and certain direct transaction costs of the common shares or ADSs, 22.0% (inclusive of local income surtax) of the net realized gain, and to make payment of these amounts to the Korean tax authority, unless you establish your entitlement to an exemption under an applicable tax treaty or domestic tax law. See Tax Treaties below for a discussion on claiming treaty benefits.

Tax Treaties

Korea has entered into a number of income tax treaties with other countries (including the United States), which would reduce or exempt Korean withholding tax on dividends on, and capital gains on transfer of, the common shares or ADSs. For example, under the Korea-United States income tax treaty, reduced rates of Korean withholding tax of 16.5% or 11.0% (depending on your shareholding ratio and inclusive of local income surtax) on dividends and an exemption from Korean withholding tax on capital gains are available to residents of the United States that are beneficial owners of the relevant dividend income or capital gains, subject to certain exceptions. However, under Article 17 (Investment or Holding Companies) of the Korea-United States income tax treaty, such reduced rates and exemption do not apply if (i) you are a United States corporation, (ii) by reason of any special measures, the tax imposed on you by the United States with respect to such dividend income or capital gains is substantially less than the tax generally imposed by the United States on corporate profits and (iii) 25% or more of your capital is held of record or is otherwise determined, after consultation between competent authorities of the United States and Korea, to be owned directly or indirectly by one or more persons who are not individual residents of the United States. Also, under Article 16 (Capital Gains) of the Korea-United States income tax treaty, the exemption on capital gains does not apply if (a) you have a permanent establishment in Korea and any shares of common stock in which you hold an interest and which give rise to capital gains are effectively connected to such permanent establishment, (b) you are an individual and you maintain a fixed base in Korea for an aggregate of 183 days or more during a given taxable year and your ADSs or common shares giving rise to capital gains are effectively connected with such fixed base or (c) you are an individual and you are present in Korea for an aggregate of 183 days or more during a given taxable year.

You should inquire for yourself whether you are entitled to the benefit of a tax treaty between Korea and the country where you are a resident. It is the responsibility of the party claiming the benefits of an income tax treaty in respect of dividend payments or capital gains to submit to us, the purchaser or the financial investment company, as applicable, a certificate as to his tax residence. In the absence of sufficient proof, we, the purchaser or the financial investment company, as applicable, must withhold tax at the normal rates. Furthermore, in order for you to claim the benefit of a tax rate reduction or tax exemption on certain Korean source income (such as dividends or capital gains) under an applicable tax treaty, Korean tax law requires you (or your agent) to submit an application (for a reduced withholding tax rate, the application for entitlement to a reduced tax rate, and in the case of exemptions from withholding tax, the application for tax exemption along with a certificate of your tax residency issued by a competent authority of your country of tax residence, subject to certain exceptions) as the beneficial owner of such Korean source income, or a BO application. For example, a U.S. resident would be required to provide a Form 6166 as a certificate of tax residency together with the application for entitlement to reduced tax rate or the application for tax exemption. Such application should be submitted to the withholding agent prior to the payment date of the relevant income. Subject to certain exceptions, where the relevant income is paid to an overseas investment vehicle (which is not the beneficial owner of such income), or an OIV, a beneficial owner claiming the benefit of an applicable tax treaty with respect to such income must submit its BO application to such OIV, which must submit an OIV report and a schedule of beneficial owners to the withholding agent prior to the payment date of such income. In the case of a tax exemption application, the withholding agent is required to submit such application (together with the applicable OIV report in the case of income paid to an OIV) to the relevant district tax office by the ninth day of the month following the date of the payment of such income.

Inheritance Tax and Gift Tax

If you die while holding an ADS or donate an ADS, it is unclear whether, for Korean inheritance tax and gift tax purposes, you will be treated as the owner of the common shares underlying the ADSs. If the tax authority interprets depositary receipts as the underlying share certificates, you may be treated as the owner of the common shares and your heir or the donee (or in certain circumstances, you as the donor) will be subject to Korean inheritance tax or gift tax presently at the rate of 10% to 50%, provided that the value of the ADSs or common shares is greater than a specified amount.

If you die while holding a common share or donate a common share, your heir or donee (or in certain circumstances, you as the donor) will be subject to Korean inheritance tax or gift tax at the same rate as indicated above.

At present, Korea has not entered into any tax treaty relating to inheritance or gift taxes.

Securities Transaction Tax

If you transfer our common shares on the Korea Exchange, you will be subject to securities transaction tax at the rate of 0.15% (which will be decreased to 0.1% on June 3, 2019, pursuant to an amendment to the Enforcement Decree of the Securities Transaction Tax Act which was pre-announced on April 2, 2019) and an agriculture and fishery special surtax at the rate of 0.15% of the sale price of the common shares. If your transfer of the common shares is not made on the Korea Exchange, subject to certain exceptions, you will be subject to securities transaction tax at the rate of 0.5% and will not be subject to an agriculture and fishery special surtax.

Under the Securities Transaction Tax Law, depositary receipts (such as American depositary receipts) constitute share certificates subject to the securities transaction tax. However, the transfer of depositary receipts listed on the New York Stock Exchange, the Nasdaq Global Market, or other qualified foreign exchanges is exempt from the securities transaction tax.

In principle, the securities transaction tax, if applicable, must be paid by the transferor of the common shares or ADSs. When the transfer is effected through a securities settlement company, such settlement company is generally required to withhold and pay the tax to the tax authorities. When such transfer is made through a financial investment company only, such financial investment company is required to withhold and pay the tax. Where the transfer is effected by a non-resident without a permanent establishment in Korea, other than through a securities settlement company or a financial investment company, the transferee is required to withhold the securities transaction tax.

Non-reporting or under-reporting of securities transaction tax will generally result in penalties equal to 20% to 60% of the non-reported tax amount or 10% to 60% of under-reported tax amount. Also, a failure to timely pay securities transaction tax will result in a penalty equal to 9.125% per annum of the due but unpaid tax amount. The penalties are imposed on the party responsible for paying the securities transaction tax or, if such tax is required to be withheld, on the party that has the obligation to withhold.

Item 10.F. ***Dividends and Paying Agents***
Not Applicable

Item 10.G. ***Statements by Experts***
Not Applicable

Item 10.H. ***Documents on Display***
We are subject to the information requirements of the Exchange Act, and, in accordance therewith, are required to file reports, including annual reports on Form 20-F, and other information with the U.S. Securities and Exchange Commission. These materials, including this annual report and the exhibits thereto, may be inspected and copied at the Commission s public reference rooms in Washington, D.C., New York, New York and Chicago, Illinois. Please call the Commission at 1-800-SEC-0330 for further information on the public reference rooms. We are also required to make filings with the Commission by electronic means. Any filings we make electronically will be available to the public over the Internet at the Commission s web site at *http://www.sec.gov.*

Item 10.I. ***Subsidiary Information***
Not Applicable

Item 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Overview

As a financial services provider, we are exposed to various risks related to our lending and trading businesses, our funding activities and our operating environment, principally through Woori Bank, our banking subsidiary. Our goal in risk management is to ensure that we identify, measure, monitor and control the various risks that arise, and that our organization adheres strictly to the policies and procedures which we establish to address these risks. We seek to take a conservative approach to risk management in order to better insulate our operations from adverse events. Risks we face include:

- credit risk;
- market risk (primarily interest rate risk, equity risk, foreign exchange risk and commodity risk);
- liquidity risk; and
- operational and business risk (including legal risk).

We operate a standardized risk management system which enhances our risk management capabilities by enabling us to exchange information among our and our subsidiaries risk management operations. We have further strengthened our risk management systems by (i) using Tier I capital as available capital for purposes of our risk capital allocation to fulfill Basel III requirements, and (ii) including stressed VaR to our market risk capital calculations in accordance with the guidance of the Financial Supervisory Service. We use our risk management systems to manage our risks within acceptable limits and to otherwise ensure the soundness of our assets and the stability of our operations.

We allocate our total risk capital in accordance with the guidelines set by our Board Risk Management Committee. As described in more detail below, the committee allocates risk capital and approves the risk limit requests of our subsidiaries. Through our standardized risk management system, we allocate our risk capital:

- with respect to our credit risk on the basis of a standardized approach as well as other portfolio credit models;
- with respect to our market risk based on a market value at risk, or VaR, system and including stressed VaR ; and
- with respect to our interest rate risk based on a historical simulation method, which simulates the current portfolio s net present value at a 99.9% confidence level for a one-year holding period.

We allocate our risk capital with respect to operational risk through an advanced measurement approach for Woori Bank and a standardized approach for our other subsidiaries, in accordance with Basel II.

Our risk capital allocation by entity as a percentage of available capital, on a non-consolidated basis, with respect to 2019 is as follows:

	Credit	Market	Operational

	Available capital[1]	Risk capital	Risk appetite				Interest rate
	(in billions of Won, except percentages)						
Woori Financial Group	19,713	14,842	75.3%	64.6%	5.1%	5.4%	5.6%
Woori Bank	20,324	14,820	72.9%	62.5%	5.0%	5.3%	5.4%
Woori Card	1,610	944	58.6%	50.9%		5.8%	6.9%
Woori Investment Bank	316	275	87.0%	80.1%	4.7%	2.8%	2.5%
Woori Private Equity	36	22	60.6%	58.3%		5.6%	

(1) Estimates based on Tier I capital.

Organization

We have a multi-tiered risk management governance structure. Our Board Risk Management Committee is ultimately responsible for group-wide risk management, and directs the various subordinate risk management entities. The Group Risk Management Council answers to the Board Risk Management Committee and, together with the Group Risk Management Department, coordinates the execution of its directives with each Subsidiary Risk Management Department. Each Subsidiary Risk Management Committee, based on the Board Risk Management Committee s directives, determines risk management strategies and implements risk management policies and guidelines for the relevant subsidiary, sets the subsidiary s operational and business risk

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management policies and guidelines and directs the applicable Subsidiary Risk Management Department with support from the applicable Subsidiary Risk Management Council, but must keep within the risk guidelines of the Board Risk Management Committee. The Subsidiary Risk Management Committees generally receive input from their respective Subsidiary Risk Management Councils and Subsidiary Risk Management Departments.

The following chart sets out our risk management governance structure as of the date of this annual report:

We operate a double report system with respect to our risk management procedures. Each of our Subsidiary Risk Management Departments is required to submit risk management reports directly to the Group Risk Management Department. Through this internal reporting system, we are able to better ascertain and strengthen the monitoring of our subsidiaries risk management and are able to quickly address any deviation from our group-wide risk policies. We have further supplemented our double report system by strengthening the role and independence of chief risk officers in our subsidiaries and expanding the role of Subsidiary Risk Management Departments. Each Subsidiary Risk Management Department is required to report directly to such subsidiary s chief risk officer on all material risk management issues as well as following the procedures under the double report system.

The Board Risk Management Committee, the Group Risk Management Council, the Subsidiary Risk Management Committees and the Subsidiary Risk Management Councils are responsible for managing risks relating to credit, markets, asset and liability management and liquidity. Each Subsidiary Risk Management Department is generally responsible for managing operational risks at the relevant subsidiary, while the Audit Department coordinates the execution of our operational and business risk management policy, particularly with

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regard to internal subsidiary practices, and the Legal and Compliance Department monitors compliance risk and makes suggestions regarding regulatory issues to the Financial Supervisory Service.

Board Risk Management Committee

The Board Risk Management Committee is our highest decision-making body with respect to our risk management operations. Our board of directors has delegated to it the authority to oversee and make determinations on all significant issues relating to our risk management system. It implements policies regarding, monitors and has ultimate responsibility for managing credit, market and liquidity risk and for asset and liability management. The committee s major activities include:

- determining and amending risk management policies, guidelines and limits in conformity with the strategy established by the board of directors;

- determining the appropriate level of risks that we should be willing to undertake, including in connection with key business activities such as acquisitions, investments or entering into new business areas, prior to a decision by the board of directors on such matters;

- allocating risk capital to each subsidiary and approving the risk limits of our subsidiaries;

- reviewing our group-wide risk profile, including the level of risks we are exposed to and the status of our risk management operations; and

- monitoring our subsidiaries compliance with our risk policies.

The Board Risk Management Committee is comprised of three outside directors. It operates independently from all business groups and individual board members, and reports directly to our board of directors. We require the chairperson of the Board Risk Management Committee to be chosen from among the outside directors in order to enhance the independence and experience level of such chairperson. Our Board Risk Management Committee convenes at least quarterly, and makes decisions by a majority vote of the attending members. At least a majority of the committee members must attend to constitute a quorum.

Group Risk Management Council

Our Group Risk Management Council is responsible for coordinating with the Subsidiary Risk Management Departments to ensure that they execute the policies, guidelines and limits established by the Board Risk Management Committee. The Group Risk Management Council s major activities include:

- analyzing our risk status using information provided by the Subsidiary Risk Management Departments;

- adjusting the integrated risk-adjusted capital allocation plan and risk limits for each of our subsidiaries;

- reviewing the key decisions of each Subsidiary Risk Management Committee and discussing and resolving any risk management issues raised by those committees;

- coordinating issues relating to the integration of our risk management functions; and

- performing any other duties delegated by the Board Risk Management Committee.

The Group Risk Management Council consists of six members, including our chief risk officer and the chief risk officers of our subsidiaries. It operates independently from all business groups, and reports directly to the Board Risk Management Committee. The Group Risk Management Council convenes on a monthly basis.

Our subsidiaries, in most cases through their respective Subsidiary Risk Management Departments, provide a variety of information to the Group Risk Management Council, including:

- reports regarding the status of overall risk management, the status of limit compliance, and analysis and results of stress testing and back testing; and

- reports regarding asset and liability management matters, including changes in risk-weighted assets and the status of our credit portfolio on a periodic basis.

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Subsidiary Risk Management Committees

Each of our subsidiaries operating businesses that require risk management delegates risk management authority to its Subsidiary Risk Management Committee. Each Subsidiary Risk Management Committee measures and monitors the various risks faced by the relevant subsidiary and reports to that subsidiary s board of directors regarding decisions that it makes on risk management issues. It also makes strategic decisions regarding the operations of the relevant subsidiary, such as allocating credit risk limits, setting total exposure limits and market risk-related limits and determining which market risk derivatives instruments the subsidiary can trade. The major activities of each Subsidiary Risk Management Committee include:

- determining and monitoring risk policies, guidelines, limits and tolerance levels and the level of subsidiary risk in accordance with group policy, with the support of the relevant Subsidiary Risk Management Council;
- reviewing and analyzing the subsidiary s risk profile;
- setting limits for and adjusting the risk-adjusted capital allocation plan and risk levels for each business group within the subsidiary; and
- monitoring compliance with our group-wide risk management policies and practices at the business group and subsidiary level.

Each Subsidiary Risk Management Committee generally includes two or more outside directors of the subsidiary.

Subsidiary Risk Management Council

Each of our relevant subsidiaries has a Subsidiary Risk Management Council, which is responsible for supporting the relevant Subsidiary Risk Management Committee in the implementation of its risk management policies and guidelines for such subsidiary, including by reviewing and reporting on agenda items to be discussed at meetings of the relevant Subsidiary Risk Management Committee, reviewing reports from the relevant Subsidiary Risk Management Department and performing any other duties delegated by the relevant Subsidiary Risk Management Committee.

Each Subsidiary Risk Management Council is generally comprised of the subsidiary s chief risk management officer, the head of its Subsidiary Risk Management Department and other executive officers responsible for such subsidiary s risk management-related functions. It operates independently from all business units, and reports directly to the Subsidiary Risk Management Committee.

Credit Risk Management

Our credit risk management policy objectives are to improve our asset quality, reduce our non-performing loans and minimize our concentration risk through a diversified, balanced and risk-weighted loan portfolio. We manage credit risk and continually monitor and improve our credit risk-related policies and guidelines to reflect changing risks in our business and the industries and sectors in which our customers operate.

We believe that an essential part of achieving our credit risk management objectives is utilizing a standardized risk management system so that we can identify and manage the risks generated by our businesses using a consistent approach. Woori Bank is currently using a centralized credit risk management system called the CREPIA system. CREPIA is a credit risk management system which combines credit risk management and the credit approval process on a transactional level with respect to individual borrowers and approval with respect to each individual loan or credit. The system quantifies credit risk with respect to corporate borrowers using a mark-to-market methodology, which reflects both the likelihood of a default by a borrower as well as the likelihood of a change in such borrower s credit rating, and quantifies credit risk with respect to retail borrowers using a default mode methodology, which reflects the likelihood of a default by a borrower. We believe that CREPIA is a systematic and efficient credit evaluation system and that Woori Bank has expedited its

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loan review process and improved its ability to monitor and evaluate its overall risk profile by using this system. The main characteristics of CREPIA are as follows:

- *automation of credit risk management system*, which allows us to centralize and automate many tasks relating to our credit risk management system;

- *automatic recognition and processing of different forms of credit*, which allows us to process and approve different types of credit, such as new applicants, renewing applicants and changes in the condition of the loan or credit approved;

- *incorporation of credit risk management prior to approval of credit*, which allows us to consider individualized characteristics of a borrower and enables us to calculate a more accurate price with respect to the loan or credit approved;

- *automatic credit risk monitoring after approval of credit*, which allows us to evaluate and re-rate the loan or credit on a real-time basis as a result of any change in the characteristics of the borrower (including the condition of the underlying collateral, change in borrowing limit and early warning characteristics); and

- *automatic verification of internal procedures and regulations with respect to approval of credit*, which reduces our operational risk and ensures that there are no material deviations from our loan and credit policies.

We also impose a credit risk limit for Woori Bank with respect to large exposures. We aim to avoid concentrations of exposure with respect to any single corporate borrower or affiliated group of corporate borrowers. Accordingly, we have established aggregate exposure limits based on capital adequacy levels of Woori Bank and, with respect to individual corporate borrowers, established limits by dividing the expected loss with respect to companies affiliated with such corporate borrower with the unexpected loss (a measurement of credit risk) of such borrower and converting that into an exposure amount. We use this as the basis for our large exposure limits with respect to such corporate borrower.

We also impose a similar credit risk limit for Woori Private Equity Asset Management with respect to investment in private equity funds. Much like large exposure limits with respect to corporate borrowers, we aim to avoid concentrations of exposure with respect to any single private equity fund or affiliated group of funds. Accordingly, we have established aggregate investment limits based on the capital adequacy levels of Woori Private Equity Asset Management and, with respect to limits on each opportunity to invest, established limits depending on whether the target fund is an affiliate, or our participation or the participation by our subsidiaries is as a limited or general partner. We also impose a principal investment limit for investment activities that our subsidiaries undertake as a principal (as opposed to as an agent). The principal investment limit for each subsidiary is set as a certain percentage of the capitalization of such subsidiary.

We use our credit risk management systems to measure and control credit risk, to evaluate and approve new credit and to review and monitor outstanding credit. We conduct various quantitative and qualitative analyses to establish acceptable risk levels that provide what we believe are appropriate levels of return on investments. The credit risk management systems that we use to do this integrate various data, including customers financial and economic condition, limits on loans and guarantee amounts, cash flow evaluations, collateral levels, our desired profit margin and the likelihood of unexpected loan losses.

Each relevant subsidiary monitors its level of risk, determines how that level compares to our target optimized level of risk on a monthly basis and produces risk analysis reports and optimization reports on a monthly basis and stress test reports on an ad hoc basis. These reports are sent to the respective Subsidiary Risk Management Committees and to the Board Risk Management Committee and provide a basis to set risk limits for, and allocate capital to, a subsidiary s business groups.

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Credit Evaluation and Approval

Our subsidiaries evaluate the credit of every loan applicant and guarantor before approving any loans, except for:

- loans guaranteed by letters of guarantee issued by the Korea Credit Guarantee Fund, the Korea Technology Credit Guarantee Fund or certain other specified Korean government-controlled funds;
- loans guaranteed by highly rated banks;
- loans fully secured by deposits with us; and
- loans against commercial promissory notes issued by creditworthy companies at a discount to the face value of the note determined by the issuer s creditworthiness.

The evaluation and approval process differs depending on whether the loan is a corporate loan, a general household consumer loan, or a mortgage or home equity loan, and there is a separate process for credit card applications. For example, Woori Bank has in recent years implemented a standardized expected loss and unexpected loss credit risk system which we believe enables us to better allocate risk capital by evaluating unexpected loss (a measurement of credit risk), VaR (a measurement of market risk) and earnings at risk (a measurement of whether our assets and liabilities are mismatched).

Woori Bank has also undertaken a number of initiatives to develop credit evaluation and loan approval procedures that are more systematic and efficient. We prefer to use credit rating systems in our credit evaluation and loan approval process because they:

- yield a uniform result regardless of the user;
- can be used effectively by employees who do not have extensive experience in credit evaluation;
- can be easily updated to reflect changing market conditions by changing how factors are weighted;
- significantly limit the scope of employee discretion in the loan assessment and approval process; and
- improve loan processing times while generally resulting in declines in delinquencies among new borrowers.

Woori Bank operates a CREPIA credit evaluation system for corporate loans (including small- and medium-sized enterprise loans) and a consumer credit evaluation system for consumer loans.

Customers apply for loans by submitting a loan application through one of Woori Bank s branches. These applications are initially reviewed using the appropriate credit evaluation system and, in the case of applications for a small amount or involving applicants with little or no credit risk, are approved by the branch manager or a relationship manager acting in concert with a credit officer based on the credit risk rating they receive under that system. Applications for larger loans and loans which are determined to involve greater credit risk are approved by bodies with greater authority, depending on where those loans fall in a matrix of size, collateral and credit risk. These loan applications will be referred to a credit officer committee at an office located near the customer, which may or may not be at Woori Bank s headquarters. Every credit officer committee is made up of credit officers from headquarters and has the same level of authority. Applications that cannot be approved by a credit officer committee are referred to a senior credit officer committee or the Loan Committee of Woori Bank, depending on loan size, collateral and credit risk. The following table sets forth the various Woori Bank committees and personnel involved in its credit evaluation and loan approval process:

Committee	Members	Approval Process
Headquarters Approval		
Loan Committee	Head of the credit support group, head of the risk management department, head of the investment banking group, head of the capital market group, head of	2/3 required for approval; 2/3 required to participate

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Committee	Members	Approval Process
	the large corporate audit department, and head of medium-size enterprise audit department (no more than seven persons)	
Headquarters/Regional Approval		
Senior Credit Officer Committee	One head senior credit officer and four to six other senior credit officers (five to seven persons)	2/3 required for approval; 2/3 required to participate
Credit Officer Committee	At least one senior credit officer and two other credit officers (at least three persons)	2/3 required for approval; 2/3 required to participate
Individual Approval		
Senior Relationship Manager	Individual	Approval of the individual
Relationship Manager	Individual	Approval of the individual
Branch Manager	Individual	Approval of the individual

Different individuals or committees review and approve loan applications depending on various factors, including:

- the size and type of the loan;
- the level of credit risk established by the credit rating system;
- whether the loan is secured by collateral; and
- if the loan is secured, an assessment of the collateral.

Loan applications are generally reviewed only by the highest-level committee required to approve the loan, although multiple reviews, including separate reviews at the branch, regional and headquarters level, may occur depending on the size and terms of any particular loan or a borrower s credit risk.

Corporate Loan Approval Process

Woori Bank s branches review corporate loan applications using a credit evaluation system for corporate borrowers. Each corporate credit evaluation system measures various quantitative and qualitative factors. The model used by the credit evaluation system to review an application depends, however, on certain characteristics of the potential borrower. Woori Bank s credit risk management unit, together with its large corporate loan department and small- and medium-sized enterprise loan department, has developed separate credit evaluation models for large corporate borrowers that are subject to external audit under the Act on External Audits of Stock Companies, large corporate borrowers that are not subject to external audit, medium-sized enterprises and SOHO borrowers that either have outstanding loans, or are applying for a loan, in excess of 1 billion. In general, each model uses scores from both a computerized evaluation of quantitative financial factors, such as cash flow and income, and more qualitative factors which are scored using judgments by the credit officer or officers reviewing the application to produce an overall credit risk rating. These credit evaluation systems provide Woori Bank with tools to make consistent credit decisions and assist it in making risk-based pricing decisions. Woori Bank s CREPIA system, depending on whether the borrower is audited by independent auditors and its size, produces two separate scores based on one of 14 rating models: one for quantitative current financial factors, which is weighted 60% in determining the CREPIA credit risk rating, and another for the more qualitative factors that the judgment of credit officers plays a more significant part in determining, which is weighted 40%. The CREPIA credit risk rating estimates the probability that Woori Bank will recover extended credits and the likelihood that borrowers will default. Qualitative factors included in CREPIA include:

- a customer s future financial condition;
- its competitive position in the industry;

its industry situation;

the quality of its management;

its technological merits;

its operations;

the nature and the location of any collateral; and

Woori Bank s level of priority in that collateral to estimate non-recovery risks.

These qualitative factors are input into the CREPIA system by the credit officer, and are scored based on his or her historical experience and that of the bank.

The CREPIA system produces separate credit risk ratings for each borrower and for each loan requested by that borrower. Woori Bank s credit analysis and approval center evaluates and approves corporate loan applications based on these credit risk ratings. The CREPIA system assigns each borrower and facility one of the following fourteen credit risk rating grades from AAA to D, which are classified as follows: AAA (extremely strong), AA (very strong), A+ (strong), A (good), BBB+ (more adequate), BBB (adequate), BBB (less adequate), BB+ (less susceptible), BB (susceptible), BB (more susceptible), B+ (slightly weak), B (weak), C (very weak) and D (default). Certain loans are subject to review by the Loan Committee depending on the size of the loan and the determined credit risk rating. Examples of this include loan applications for secured loans in excess of 80 billion for a borrower or facility with a credit risk rating of A- and above, and, at the other extreme for unsecured loans, loan applications in excess of 4 billion for a borrower or facility with a credit risk rating of BB to C. Applications from borrowers with loans on a watch list (see Credit Review and Monitoring below) are also automatically reviewed by the Loan Committee.

Woori Bank uses the same systems to evaluate and approve applications from small- and medium-sized enterprises that it uses to evaluate other corporate borrowers, but uses different credit evaluation models. Woori Bank s credit evaluation models for small- and medium-sized enterprise customers, which are incorporated into the CREPIA system, use the same quantitative and qualitative factors that Woori Bank uses to evaluate other corporate customers. However, the small- and medium-sized enterprise models apply a 50% weighting to the score derived from quantitative factors and a 50% weighting to the score derived from the more flexible qualitative factors in determining the credit risk rating. Woori Bank also uses a separate credit evaluation model to evaluate newly opening small- and medium-sized enterprises that relies solely on qualitative factors. In addition, Woori Bank has adopted a separate credit evaluation system for SOHOs (such as pharmacies, clinics and restaurants) which either have outstanding loans, or are applying for a loan, of 1 billion or less that uses simpler credit evaluation models and resembles its application scoring system for new retail customers.

With respect to the evaluation of any collateral to which a commercial loan application relates (which principally consists of land, buildings and equipment), the fair value of such underlying collateral for commercial loans is appraised by external valuation experts and such appraisals are collated in Woori Bank s CREPIA system. Woori Bank uses its CREPIA system to manage its lending activities, and inputs data gathered from loan application forms, credit scores of borrowers and the appraisal value of collateral provided by external valuation experts into the CREPIA system and updates such information periodically to reflect changes in such information (such as any changes in credit scores of borrowers or the appraisal value of collateral). In addition, to validate the appropriateness of the appraisal values provided by such external valuation experts, Woori Bank reviews the qualification of the external valuation experts (including a review of whether such experts are legitimately registered with the Korea Association of Property Appraisers) and evaluates the assumptions and valuation model used by such experts as well as the appropriateness of variables by reference to market data and comparisons to actual transaction prices in similar regions.

We have set credit limits for our corporate customers. Some of these limits, particularly those imposed by Korean banking regulations, are aimed at preventing loan concentrations relating to any single customer. See Item 4.B. Business Overview Supervision and Regulation Principal Regulations Applicable to Banks Financial Exposure to Any Individual Customer or Major Shareholder. In certain cases, we have introduced and implemented internally developed large exposure limits that are stricter than the applicable Financial Services Commission requirements.

In evaluating applications, credit officers or the Loan Committee will often, in addition to reviewing ratings from these credit evaluation models, also refer to corporate information gathered or ratings assigned by external credit rating agencies, such as the Korea Federation of Banks, Korea Information Service, Korean government-released information on bankruptcy rates, National Information & Credit Evaluation Inc. and Korea Management Consulting & Credit Rating Corporation. They review the information we obtain from these sources and compare it to the information we have developed internally with respect to our customers to improve the accuracy of our internal credit ratings.

Consumer Loan Approval Process

The consumer loan department of Woori Bank evaluates and approves consumer loan applications using a dedicated consumer credit evaluation system. Woori Bank s consumer credit evaluation system assigns a credit score to each application based on its evaluation of various factors. These factors include any loan and guarantee limits Woori Bank has set for particular borrowers or groups of borrowers and our evaluation of their cash flows and credit profiles. The system gives each customer s loan application a score from one to ten. Woori Bank also uses another scoring system based on the external ratings provided by the Korea Credit Bureau. Applications are classified as automatically approved, automatically rejected and subject to further evaluation based on a combination of the scores of these two systems. Woori Bank uses these systems to evaluate all new consumer loan applications, except for loans fully secured by deposits with Woori Bank.

Woori Bank augments its consumer credit evaluation system with a behavioral scoring system. The behavioral scoring system enhances the consumer credit evaluation system by enabling the consideration of factors not previously evaluated, including the customer s spending history and credit behavior. By the nature of the information it analyzes, however, the behavioral scoring system can only be used for applications of persons who are existing borrowers, generally consisting of roll-overs of outstanding amounts or increases to existing credit limits.

We also evaluate any collateral to which a consumer loan application relates (which principally consists of residential properties) using the fair value of the underlying collateral appraised by Korea Investors Service as part of our loan approval process. Such appraisals are collated in the CREPIA system used by Woori Bank, and such information is updated periodically to reflect changes (such as any changes in credit scores of borrowers or the appraisal value of collateral). For example, Woori Bank automatically obtains re-evaluations for the underlying collateral for secured consumer loans and mortgages every month with respect to apartments. If the value of the collateral declines, we may have the ability to require that the borrower provide more collateral or to change the payment terms of the relevant loan.

Credit Card Approval Process

We have worked to ensure that risk management and credit extension policies with respect to our credit card operations through our indirect subsidiary, Woori Card, reflect our group-wide risk management policies and guidelines.

Woori Card reviews each new card application for completeness, accuracy and creditworthiness. It bases this review on various factors that assess the applicant s ability to repay borrowed amounts. The review process involves three stages:

Initial Application Process. Woori Card verifies basic information by requesting certain documents from the applicant, generally contacts the applicant directly (usually by telephone, although there are personal visits to some applicants) and statistically analyzes the applicant s personal credit history together with financial and default information gathered from third-party sources and its internal database. The analysis considers various factors including employment, default status and historical relationships with Woori Bank and any delinquency history with other credit card companies. Woori

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Card also reviews information about an applicant obtained from external databases maintained by the Korea Federation of Banks and Nice Information Service Inc.

Application Scoring System Process. The application scoring system at Woori Card is a standardized evaluation tool used to determine the probability of a credit card applicant defaulting during the one-year period following issuance. The application scoring system, using a statistical model, assigns risks to factors that indicate a probability of non-payment. The model analyzes credit history, occupation and income data to develop a combined risk score. The applicant s eligibility to receive a credit card and credit limit is determined by its anticipated delinquency ratio over 90 days within one year.

Credit Assessment. If the application is approved, then the application scoring system assessment is used to determine the applicant s credit limit. The aggregate credit limit for a new applicant who is an individual rarely exceeds 20 million. There is a separate but similar system for determining the credit limit available to corporate card applicants, which will generally be higher than limits available to individual applicants but will not provide for the ability to obtain cash advances.

The entire approval process generally takes two to three days and the applicant receives the new card within one week after making an application. Woori Card evaluates and updates the application scoring system on a monthly basis (or more frequently as required) to incorporate new data or adjust the importance placed on existing data or market conditions.

Credit Review and Monitoring

Our credit review and monitoring procedures are designed to reduce the risks of deterioration in our asset quality and to maintain acceptable levels of portfolio risk. These procedures include:

- confirming a borrower s credit rating or score;
- ensuring the accuracy of the credit analysis done by our credit officers; and
- ensuring compliance with internal policies relating to loan approval.

We believe that these procedures enable us to identify potential non-performing loans as soon as possible and minimize the possibility of approving in advance loans that will become non-performing. These procedures also enable us to manage credit risk more effectively and set interest rates to more accurately reach our targeted level of return.

Loan Review and Monitoring

Woori Bank monitors credit risk with respect to our borrowers using its loan review system. Woori Bank has a loan review unit that oversees its review and monitoring efforts. After a loan has been approved, the relevant materials or the results generated by Woori Bank s credit evaluation system, together with any supporting data, are reviewed by an officer in that unit. There are three types of reviews that Woori Bank s loan review unit undertakes:

Desk review. Desk reviews are the most common and are generally done within five days after a loan has been approved. Although the process is similar, different loans are automatically reviewed by Woori Bank based on the size of the loan. The loan review unit will initiate a desk review of loans approved by a credit officer committee or the Loan Committee, for any corporate loan over 5 billion, any consumer loan over 1 billion, any loan to a housing applicant group over 5 billion or any loan where the loan terms were adjusted. For loans originating from a branch, the loan review unit will randomly initiate a desk review for new domestic loans. For overseas loans, desk reviews are conducted for new loans (including credit limit increases) over US$300,000. Ex post desk reviews are also conducted on consumer and corporate loans approved by a domestic branch manager for borrowers with aggregate unsecured loans over 50 million or aggregate secured loans over 300 million, and new consumer and corporate loans (including credit limit increases) over US$30,000 approved by overseas branch managers.

Periodic review. Periodic reviews are done on a quarterly, semi-annual or annual basis with respect to loans that are current and over 10 billion or with respect to borrowers who are on a watch list with respect to possible insolvency. Quarterly periodic reviews are done for certain corporate borrowers, depending on their size and the borrower s industry.

Ad hoc review. Ad hoc reviews can be done at any time. The head of Woori Bank s Risk Management Department or the chief executive officer or chief financial officer of Woori Bank can initiate ad hoc reviews. Loan review officers who are responsible for desk and periodic reviews also conduct ad hoc reviews. Following a review, Woori Bank s sales office may hold additional meetings with the borrower and adjust the loan amount or the borrower s credit rating. The loan review unit may also direct sales office personnel to institute early collections or to adjust a borrower s credit rating, total exposure and asset portfolio without consulting the borrower. The loan review officer may request that the credit officer adjust a borrower s credit ratings based on various factors, including asset quality, credit limits, applied interest rates and our credit policies. We also continually review other factors, such as industries in which borrowers operate and their domestic and overseas assets and operations, to ensure that our ratings are appropriate.

Woori Bank monitors and manages its exposures to and credit limits for corporations and *chaebols* on a daily basis. Woori Bank uses its Total Exposure Management System to make real-time inquiries regarding its exposures, either by company or by *chaebol*, and to manage the credit limits for all kinds of business transactions. Woori Bank monitors and analyzes these exposures on a monthly basis. Corporate borrowers on Woori Bank s watch list are monitored more closely and with respect to additional aspects of their relationships with us. Woori Bank places borrowers on its watch list when it believes that any impediment on a borrower s ability to meet its financial obligations exists or is pending. Woori Bank may also monitor newly extended credits or any additional credits extended to a previous borrower more frequently if it believes additional monitoring is necessary after reviewing the loan approval process. Credits outstanding to a particular industry or region that Woori Bank believes are higher risk are monitored even more frequently. Based on the results of such monitoring, the loan review unit of Woori Bank provides monthly reports to its chief executive officer and its Risk Management Committee.

Woori Bank has the ability to conduct daily surveillance on the status of its retail borrowers through an on-line system established by the Korea Federation of Banks. This system, which tracks consumer loans at all major Korean banks and non-banking institutions, permits us to track all loan defaults by any borrower. Woori Bank evaluates the need to monitor consumer loans by using its consumer credit evaluation system, including its behavioral scoring system, and makes adjustments to the credit scoring formula based on the results of that process.

Woori Bank s loan review unit in its Risk Management Department is required to submit monthly loan review reports and quarterly deficiency reports to the chief executive officer and the head of the Risk Management Department of Woori Bank. The chief executive officer then provides feedback to the relevant sales offices of Woori Bank s branches through its auditing team or relevant business group. Based on these reports, we may, for example, stop lending to particular borrowers, change credit limits or modify our loan approval procedures. We do not monitor loans to certain borrowers, such as loans to government entities.

Credit Card Review and Monitoring

Woori Card monitors its risk exposure to individual accounts on a regular basis. It monitors each customer s card usage trends and negative credit data such as delinquency information through both its own credit risk management system (which was developed with the assistance of an outside consultant) and BC Card s similar system (which BC Card maintains for its member institutions). These systems monitor the behavior of users of Woori Card s credit cards, using both internally generated information and information from external sources. Woori Card statistically analyzes this information to estimate each customer s creditworthiness on a monthly basis. The credit risk management system is an integral part of the credit practices at Woori Card and is used to determine increases or decreases in credit limits, reset interest rates, set fee levels, authorize special transactions and approve card loans using criteria such as:

- how much credit each customer has incurred in the past (i.e., frequency and amount of payments);
- whether a customer uses his card to make credit card purchases or to get cash advances;
- internal credit scores; and
- whether the customer has been delinquent in making payments.

After assigning appropriate weightings to each factor, the system computes a behavior score and uses that score to classify each cardholder. Each customer s credit limit is subject to adjustment in accordance with the monthly updated score. Woori Card uses these results and the results of its application scoring system to evaluate its credit risk management system and make adjustments to its credit scoring formula based on the results of that process.

Woori Card s credit risk management system has also been able to run various simulations in connection with monitoring its operations, including:

- *new product simulations*, which predict a customer s likely spending pattern when using a new credit card product and analyzes that pattern to predict the new product s costs, delinquencies and profitability; and
- *credit use limit simulations*, which test whether a customer s credit limit has been properly set by simulating an increase or decrease of that limit.

Woori Card s credit administration team manages customer credit risk for users of its credit cards. It reviews and updates its underwriting, credit evaluation, collection, servicing and write-off procedures, and the terms and conditions of card agreements, from time to time in accordance with its business practices, applicable law and guidelines issued by regulatory authorities.

Early Warning Systems

Woori Bank and its subsidiary Woori Card have developed separate early warning systems that monitor the status of both commercial and retail borrowers and evaluate all of a customer s outstanding credits. These systems monitor various factors, including the financial status, financial transaction status, industry rating and management status of borrowers. They enable our subsidiaries to find defaults and signs of potential delinquency in advance, monitor these problematic credits properly before any default or delayed payment occurs and keep track of information on the credit status of borrowers. Updated information is input as it becomes available, either automatically from internal and external sources or manually. This information includes data relating to:

credit evaluation and monitoring system results, which determine if a borrower should be put on a watch list;

loan transactions, such as a borrower s remaining line of credit and whether it has any dishonored notes, overdue loans or setoffs with respect to collateral deposits which have not matured;

deposit transactions, such as any decrease in a borrower s average deposit balance, requests for large volumes of promissory notes or checks, or the inability to pay immediately available funds owed when due;

foreign exchange transactions, such as unpaid amounts of a borrower s purchased export bills that have exceeded the maturity date; and

other information, such as a borrower s management and employees, business operations, production operations, financial affairs and accounting operations and bank transactions.

We also monitor borrowers credits through on-line credit reports that are provided by Korea Information Service and National Information & Credit Evaluation, Inc., which are Korean credit reporting agencies.

After gathering this information, for example at Woori Bank, the CREPIA system reviews such information to monitor any changes that could affect the credit rating of the borrower, approval conditions with respect to the loan or credit, underlying collateral or assigned credit limit of the borrower. Depending on the likelihood of the change, the system automatically sends a signal to the responsible credit officer. The officer then evaluates the information and formulates an action plan, which could result in an adjustment in the borrower s credit rating or loan pricing, a re-evaluation of the loan or the taking of other preventative measures.

Credit Remediation

We believe that by centralizing the management of our non-performing credits within each subsidiary, we can implement uniform policies for non-performing credit resolution, pool institutional knowledge and create a more specialized (and therefore more efficient) work force. To the extent relevant to its business, each of our subsidiaries has one or more units that are responsible for managing non-performing loans. At Woori Bank, for example, the Credit Management and Collection Department and the Corporate Restoration Department generally oversee the process for resolving non-performing loans transferred to them by Woori Bank s other business groups. When a loan becomes non-performing, the Credit Management and Collection Department and the Corporate Restoration Department will begin a due diligence review of the borrower s assets, send a notice demanding payment or stating that the group will take legal action, and prepare for legal action. At the same time, Woori Bank initiates its non-performing loan management process. Once Woori Bank has confirmed the details of a non-performing loan, it makes efforts to recover amounts owed to it. Methods for resolving non-performing loans include commencing collection proceedings or legal actions and writing off such loans, transferring them to affiliates in charge of collection and authorizing those subsidiaries to recover what they can. We have also disposed of a number of non-performing credits to UAMCO and various structured companies. See Item 4.B. Business Overview Assets and Liabilities Asset Quality of Loans Non-Performing Loan Strategy.

Market Risk Management

The principal market risks to which we are exposed are interest rate risk, foreign exchange risk and, to a lesser extent, equity risk and commodity risk. We divide market risk into risks arising from trading activities and risks relating to management of our assets and liabilities.

Our Board Risk Management Committee establishes risk capital allocation and risk limits for our trading activities. The Board Risk Management Committee has delegated the responsibility for coordinating market risk management for trading activities to the Group Risk Management Council. Each Subsidiary Risk Management Department coordinates with the Group Risk Management Council. These groups review on a daily basis reports that include trading profits and losses, position reports, stress test results and value at risk results for our trading activities. Any violations of such risk limits are reported to the Group Risk Management Department.

Market Risk Management for Trading Activities

We measure market risk from trading activities to monitor and control the risk of our business groups and teams that perform those activities. Our trading activities consist of:

- trading activities for our own account to realize short-term trading profits in debt (primarily Won-denominated), equity and foreign exchange markets based on our forecasts of changes in market situation and customer demand; and trading activities involving derivatives transactions, including interest rate and foreign exchange swaps, forwards, futures and options and, to a lesser extent, commodity derivatives, primarily to sell derivatives products to our customers and to hedge our own market risk.

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Market risk arising from our trading activities can be subdivided into interest rate risk, foreign exchange risk, equity risk and commodity risk:

Interest rate risk is a significant risk to which our trading activities are exposed. This risk arises primarily from our debt securities (which are primarily held by Woori Bank). We set different risk limits for our interest rate risk for our trading and non-trading debt portfolios.

Foreign exchange risk arises from foreign currency-denominated assets and liabilities in both our trading and non-trading accounts and financial derivatives involving foreign currencies, which are not controlled separately on a trading and asset/liability management basis.

Equity risk arises from price and volatility fluctuations in equity securities and derivatives.

Commodity risk arises from price and volatility fluctuations in commodity derivatives.

The following table shows the volume and types of Woori Bank s trading positions (including trust accounts) subject to market risk as of December 31, 2016, 2017 and 2018:

	As of December 31,		
	2016	**2017**	**2018**
	(in millions of Won)		
Debt securities	2,644,916	2,644,334	1,687,869
Equity securities	40,442	21,666	218,574
Spot exchanges(1)	1,029,928	1,049,388	1,173,041
Derivatives(2)	6,235,454	6,627,055	4,606,411
Total	9,950,740	10,342,443	7,685,895

(1) Represents the overall net open currency position in each currency, which is the greater of (i) the sum of the absolute values of all short positions and (ii) the sum of the absolute values of all long positions.

(2) For over-the-counter derivatives, represents the absolute value of over-the-counter derivatives measured at fair value at the end of the relevant year. For exchange-traded derivatives, includes the amount of deposits and the collateral posted for such derivatives.

The Board Risk Management Committee monitors market risk both for the group and for each relevant subsidiary individually. See Overview. The Board Risk Management Committee has established a maximum risk appetite for each relevant subsidiary, which is defined as the risk capital of such subsidiary divided by its available capital. Risk capital is a benchmark figure that determines the VaR limits, accumulated loss limits (for trading portfolios) and present value of a basis point (or PVBP) limits (for non-trading debt securities) for each subsidiary. Available capital generally consists of shareholder s equity. Using this benchmark, as of December 31, 2018, we have established market risk limits with respect to Woori Bank as shown in the following table:

Trading Portfolio			Non-Trading Portfolio
	Accumulated Loss Limit		
VaR Limit	Quarter	Annual	PVBP Limit
(in billions of Won)			
16.5	68.1	136.2	5.3

Each of our relevant subsidiaries generally manages its market risk at the portfolio level. To control its exposure, each such subsidiary takes into consideration the VaR limits, accumulated loss limits and PVBP limits set by the Board Risk Management Committee in determining its internal allocation of risk among its various portfolios. Each relevant subsidiary also sets its own stop loss limits with respect to particular types of transactions. Each subsidiary uses an integrated market risk management system to manage market risks for its debt and equity trading operations. This system enables the subsidiary to generate consistent VaR numbers for all of its trading activities.

In addition, we have 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. See Item 5.A. Operating Results Critical Accounting Policies Valuation

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of Financial Assets and Liabilities and Notes 2-(9)-5), 3-(3) and 11 of the notes to our consolidated financial statements. For example, Woori Bank s Risk Management Department reviews the existing pricing and valuation models on a regular basis, with a focus on their underlying modeling assumptions and restrictions, to assess the appropriateness of their continued use. In consultation with its Trading Department, Woori Bank s Risk Management Department recommends potential valuation models to its Fair Value Evaluation Committee. Upon approval by Woori Bank s Fair Value Evaluation Committee, the selected valuation models are reported to its Risk Management Committee.

Value at Risk analysis. We use daily VaR to measure market risk. Our daily VaR is a statistically estimated maximum amount of loss that can occur for a day. We use a 99% confidence level to measure our daily VaR, which means the actual amount of loss may exceed the VaR, on average, once out of 100 business days. We use the historical simulation method which takes into account the diversification effects among different risk factors.

Although VaR is a commonly used market risk management technique, it has some inadequacies. Since it is a statistical approach, VaR estimates possible losses over a certain period at a particular confidence level using past market movement data. Past market movements, however, are not necessarily a good indicator of future events. Another problem with VaR is that the time periods used for the model, generally one or 10 days, are assumed to be a sufficient holding period before liquidating the relevant underlying positions. If these holding periods are not sufficient, or too long, VaR may understate or overstate the potential loss. VaR is most appropriate as a risk measure for trading positions in liquid financial markets and will understate the risk associated with severe events, such as a period of extreme liquidity.

The following table shows our daily VaR for Woori Bank as of December 31, 2016, 2017 and 2018 at a 99% confidence level for a one-day holding period, for interest rate risk, equity risk, foreign exchange risk and commodity risk relating to its trading activities.

	Interest Rate Risk	Foreign Exchange Risk	Equity Risk	Commodity Risk	Less: Diversification	VaR for Overall Trading Activities
			(in millions of Won)			
As of December 31, 2016	3,250	4,396	4,191	152	5,630	6,359
As of December 31, 2017	4,183	4,750	909	0	4,472	5,370
As of December 31, 2018	3,107	4,972	2,353	0	4,445	5,987

In 2016, 2017 and 2018, the average, high, low and ending amounts of daily VaR for Woori Bank relating to its trading activities (at a 99% confidence level for a one-day holding period) were as follows:

	As of December 31, 2016	For the year ended December 31, 2016			As of December 31, 2017	For the year ended December 31, 2017			As of December 31, 2018	For the year ended December 31, 2018		
		Average	Maximum	Minimum		Average	Maximum	Minimum		Average	Maximum	Minimum
nterest risk	3,250	2,844	6,430	1,367	4,183	3,799	4,918	2,467	3,107	3,702	5,528	1,730
oreign xchange risk	4,396	4,914	7,686	3,967	4,750	5,051	6,636	4,061	4,972	4,678	6,136	3,439
quity risk	4,191	3,456	5,063	2,304	909	2,863	4,419	909	2,353	2,669	5,081	1,138
	152	113	325	21	0	31	188	0	0	3	24	0

Commodity risk												
Diversification	(5,630)	(5,355)	(10,385)	(4,034)	(4,472)	(4,621)	(6,798)	(2,067)	(4,445)	(4,869)	(8,155)	(1,815)
Total risk	6,359	5,972	9,119	3,625	5,370	7,123	9,363	5,370	5,987	6,183	8,614	4,492

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The graph of daily 99% VaR for Woori Bank relating to its trading activities in 2018 is as follows:

Standardized Method. The standardized method is used to measure the market risk of the positions for which the Financial Supervisory Service has not approved the use of the VaR method. The following table shows, for Woori Bank, the market risk capital charges measured using the standardized method as of December 31, 2016, 2017 and 2018:

	As of December 31,		
	2016	**2017**	**2018**
	(in millions of Won)		
Risk categories			
Interest risk	11,775	12,468	9,034
Equity risk	4,930	3,367	7,522
Foreign exchanges risk	18,265	19,658	25,330
Commodity risk	3,084	1,204	0
Total	38,054	36,697	41,886

Back-testing. We conduct back testing on a daily basis to validate the adequacy of our market risk management. In our back testing, we compare both the actual and hypothetical profit and loss with VaR calculations and analyze any results that fall outside our predetermined confidence interval of 99%. The number of times the actual changes in Woori Bank s profit and loss exceeded the VaR amounts in 2016, 2017 and 2018 was 0.

Stress test. In addition to VaR, we perform stress testing to measure market risk. As VaR assumes normal market situations, we assess our market risk exposure to abnormal market fluctuations through stress testing. Stress testing is an important way of supporting VaR since VaR is a statistical expression of possible loss under a given confidence level and holding period. It does not cover potential loss if the market moves in a manner that is outside our normal expectations. Stress testing projects the anticipated change in value of holding positions under certain scenarios assuming that we take no action during a stress event to change the risk profile of a portfolio. The following table shows, for Woori Bank, the loss that would have occurred in its trading portfolio as of December 31, 2018 for assumed short-term extreme changes of a +/-20% change in the equity market and a +/-60 basis point change from interest rates prevailing in the market on that date, under an abnormal stress environment.

	(in billions of Won, except percentages)					
Equity Market Chart						
Market fluctuation amount	(20)%	(10)%	(5)%	5%	10%	20%
	(38.2)	(17.9)	(7.3)	1.0	(0.8)	(4.8)

	(in billions of Won, except basis points)					
Interest Rate Chart Basis point fluctuation amount	(60) basis points	(40) basis points	(20) basis points	20 basis points	40 basis points	60 basis points
	0.5	0.3	0.1	(0.2)	(0.3)	(0.5)

Interest Rate Risk

Interest rate risk from trading activities arises mainly from our trading of Won-denominated debt securities. Our trading strategy is to benefit from short-term movements in the prices of debt securities arising from changes in interest rates. As Woori Bank s trading accounts are marked-to-market daily, Woori Bank manages its interest rate risk related to trading accounts using market value-based tools such as VaR. See Asset and Liability Management Interest Rate Risk.

Foreign Exchange Risk

Foreign exchange risk arises because we have assets, liabilities and off-balance sheet items such as foreign exchange forwards and currency swaps that are denominated in non-Won currencies. The difference between each of our relevant subsidiaries foreign currency assets and liabilities is offset against forward foreign exchange positions to obtain its net foreign currency open position. Each of our relevant subsidiaries determines its maximum foreign exchange exposure for both trading and asset and liability management purposes by establishing a limit for this net foreign currency open position. Each Subsidiary Risk Management Committee also establishes VaR limits for the foreign exchange business of the respective subsidiary.

Assets and liabilities denominated in U.S. dollars account for the majority of our foreign currency assets and liabilities. Those denominated in Japanese yen and the euro account for most of the remainder, the majority of which have been swapped into U.S. dollars.

Each of our relevant subsidiaries monitors changes in, and matches of, foreign-currency assets and liabilities in order to reduce exposure to currency fluctuations. Most of our foreign exchange risk arises in connection with the operations of Woori Bank. Our relevant subsidiaries also manage risks relating to exchange rate fluctuations through foreign exchange dealing, including by their overseas branches. However, we conduct foreign exchange dealings primarily on behalf of our customers. Counterparties are restricted to domestic and foreign financial institutions and banks with respect to which our subsidiaries have established a foreign exchange dealing limit. Our subsidiaries deal primarily in the Won/U.S. dollar market and such dealings are subject to what we believe are conservative daily maximum and closing limits and stop loss limits. The following table sets forth information concerning Woori Bank s limits on proprietary foreign exchange dealings as of December 31, 2018:

	Won/U.S. Dollar Dealing Headquarters		**Dealings in other currencies**			
			Headquarters		**Overseas Branches**	
	Total	**Individual**	**Total**	**Individual**	**Total**	**Individual**
			(in millions of US$)			
Open position						
Daily maximum limit	US$ 1,000	US$ 200	US$ 200	US$ 50	US$ 60	US$ 15
Daily closing limit	200	50	100	20	30	6
Stop loss:						
Daily	2	0.5	0.8	0.15	0.24	0.045
Monthly	3	0.8	2	0.5	0.6	0.15

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The following table shows the non-consolidated net open positions of Woori Bank at the end of 2016, 2017 and 2018. Positive amounts represent long exposures and negative amounts represent short exposures.

	As of December 31,		
	2016	2017	2018
	(in millions of US$)		
Currency			
U.S. dollar	US$ (177.4)	US$ (278.6)	US$ 153.8
Japanese yen	(8.4)	(22.6)	(4.5)
Euro	(76.9)	(266.6)	(399.1)
Others	138.3	148.9	146.0
Total	US$ (124.4)	US$ (418.9)	US$ (103.8)

Equity Risk

Equity price risk and equity volatility risk arise primarily from Woori Bank s equity portfolio, which consists mainly of futures contracts and options and Won-denominated equity securities, as a result our imposition of strict VaR limits, accumulated loss limits and stress test limits. Equity risk arises in the context of trading activities for our own accounts to realize short-term trading profits with respect to equity securities and trading activities involving certain derivatives transactions.

Commodity Risk

Commodity risk represents exposures to instruments traded in the metals, petroleum, natural gas and other commodities markets, and arises principally from Woori Bank s trading of U.S. dollar-denominated commodity derivatives. Woori Bank manages its commodity risk using VaR, accumulated loss and stress test limits.

Derivatives-Related Market Risk

The Foreign Exchange Transaction Regulations of Korea provide that a foreign exchange bank (such as Woori Bank) may generally enter into derivatives transactions without restriction so long as those transactions are not linked with credit risks of a party to the transaction or any third party. If they are, the bank must report the transaction to the Bank of Korea.

Most of the derivatives products that our subsidiaries trade are on behalf of their customers or to hedge their own positions. Our derivatives activities include interest rate and cross-currency swaps, foreign exchange forwards, stock index and interest rate futures, forward rate agreements and currency and over-the-counter equity options.

Asset and Liability Management

Our principal market risk with respect to managing our assets and liabilities is interest rate risk. Interest rate risk arises due to mismatches in the maturities or re-pricing periods of rate-sensitive assets and liabilities, such as loans and deposits. Any imbalance of the maturity of our interest rate-sensitive assets and liabilities and the gap resulting from that imbalance may cause net interest income to be affected by changes in the prevailing level of interest rates. Our principal asset and liability management objectives are to generate stable net interest revenues and protect our asset value against interest rate fluctuations.

Woori Bank uses a standardized asset and liability management system for its Won- and foreign currency-denominated assets and liabilities. In addition, Woori Bank s system also allows it to manage the assets and liabilities in its trust accounts. Its system uses the historical scenario method to determine interest rate VaR, supplemented by modules to calculate and monitor our liquidity coverage ratio and net stable funding ratio.

Interest Rate Risk

We manage interest rate risk based on rational interest rate forecasts, using gap analysis to measure the difference between interest-sensitive assets and interest-sensitive liabilities, and using simulations to calculate the

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effect of changing interest rates on income. We principally manage this risk by managing maturity and duration gaps between our interest-earning assets and interest-bearing liabilities.

We measure interest rate risk for Won and foreign currency assets and liabilities, including derivatives and principal guaranteed trust accounts. Most of our interest-earning assets and interest-bearing liabilities are denominated in Won and our foreign currency-denominated assets and liabilities are mostly denominated in U.S. dollars. We believe, however, that our interest rate sensitivity is limited with respect to our Won-denominated assets. Deposits in Won generally bear fixed rates of interest for fixed time periods (other than deposits payable on demand which constituted approximately 43.7% of our total deposits in Won as of December 31, 2018). We generally adjust the interest rates on these deposits when they are rolled over. In addition, as of December 31, 2018, 99.1% of those deposits had current maturities of one year or less. As of December 31, 2018, approximately 65.9% of our Won-denominated loans bore floating rates of interest, and 63.7% of those loans had current maturities of one year or less.

Interest rate gap analysis measures expected changes in net interest revenues by calculating the difference in the amounts of interest-earning assets and interest-bearing liabilities at each maturity and interest resetting date. Woori Bank performs interest rate gap analysis for Won and foreign currency-denominated assets on a monthly basis.

Interest Rate Gap Analysis. For interest rate gap analysis we use or assume the following maturities for different assets and liabilities:

With respect to maturities of assets, for prime rate-linked loans, we apply the actual maturities of each loan; furthermore, we assume the reserves with the Bank of Korea and loans and securities classified as substandard or below to have maximum remaining maturities.

With respect to maturities of liabilities, for demand deposits with no fixed maturities, a portion of the demand deposits are recognized to have maturities of less than three months as calculated in accordance with Financial Services Commission guidelines.

Our Board Risk Management Committee s interest rate risk limit for Woori Bank generally requires that its earnings at risk for Won-denominated accounts be within 10% of its estimated net interest income for a one-year period. We calculate VaR through our standardized asset and liability management system, which uses the historical scenario method to simulate the current portfolio s net asset value for a one-year holding period at a 99.9% confidence level.

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The following tables show, for Woori Bank, on a non-consolidated basis pursuant to the guidelines of the Financial Supervisory Service, the interest rate gap for Won-denominated accounts and foreign currency-denominated accounts as of December 31, 2018:

	As of December 31, 2018					
	0-3 Months	3-6 Months	6-12 Months	1-3 Years	Over 3 Years	Total
	(in billions of Won, except percentages)					
Won-denominated accounts:						
Interest rate-sensitive assets						
Free interest rate	13,059	8,374	12,475	20,651	16,580	71,139
Market interest rate	113,643	35,563	9,461	20,062	10,487	189,216
Interest rate pegged to customer deposit	128	81	159	59	22	449
Total	126,830	44,018	22,095	40,772	27,089	260,804
Interest rate-sensitive liabilities						
Free interest rate	21,635	7,264	7,688	15,579	18,410	70,576
Market interest rate	67,127	33,230	54,743	10,387	4,450	169,937
Total	88,762	40,494	62,431	25,966	22,860	240,513
Sensitivity gap	38,068	3,524	(40,336)	14,806	4,229	20,291
Cumulative gap	38,068	41,592	1,256	16,062	20,291	20,291
% of total assets[(1)]	13.31%	14.54%	0.44%	5.62%	7.09%	7.09%
Total assets in Won						286,044

	As of December 31, 2018					
	0-3 Months	3-6 Months	6-12 Months	1-3 Years	Over 3 Years	Total
	(in millions of US$, except percentages)					
Foreign currency-denominated accounts:						
Interest rate-sensitive assets						
Free interest rate	US$ 0	US$ 0	US$ 0	US$ 0	US$ 0	US$ 0
Market interest rate	15,956	1,705	780	354	413	19,208
Interest rate pegged to customer deposit	0	0	0	0	0	0
Total	US$ 15,956	US$ 1,705	US$ 780	US$ 354	US$ 413	US$ 19,208
Interest rate-sensitive liabilities						

Free interest rate	US$ 0	US$ 0	US$ 0	US$ 0	US$ 0	US$ 0
Market interest rate	8,240	1,582	943	1,432	1,541	13,738
Total	US$ 8,240	US$ 1,582	US$ 943	US$ 1,432	US$ 1,541	US$ 13,738
Sensitivity gap	7,716	123	(163)	(1,078)	(1,128)	5,470
Cumulative gap	7,716	7,839	7,676	6,598	5,470	5,470
% of total assets[1]	29.09%	29.55%	28.94%	24.87%	20.62%	20.62%
Total assets in US$						US$ 26,527

(1) Represents the cumulative gap as a percentage of total assets.

Duration Gap Analysis. Woori Bank also performs a duration gap analysis to measure and manage its interest rate risk. Duration gap analysis is a more long-term risk indicator than interest rate gap analysis, as interest rate gap analysis focuses only on accounting income and not on the market value of the assets and liabilities. We emphasize duration gap analysis because, in the long run, our principal concern with respect to interest rate fluctuations is the net asset value rather than net interest revenue changes.

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For duration gap analysis, we use or assume the same maturities for different assets and liabilities that we use or assume for our interest rate gap analysis.

The following table shows, for Woori Bank, with respect to Won-denominated assets and liabilities, duration gaps and net asset value changes when the interest rate increases by one percentage point as of the specified dates:

Date	Interest-bearing asset duration (in years)	Interest-bearing liability duration (in years)	Total asset/liability duration gap (in years)	Net asset value change (in billions of Won)
June 30, 2016	0.93	0.76	0.24	618
December 31, 2016	0.85	0.74	0.17	423
June 30, 2017	0.84	0.78	0.12	292
December 31, 2017	0.82	0.78	0.11	259
June 30, 2018	0.77	0.80	0.03	83
December 31, 2018	0.84	0.80	0.10	276

We set interest rate risk limits using the historical simulation method, which uses actual historical price, volatility and yield changes in comparison with the current position to generate hypothetical portfolios and calculate a distribution of position and portfolio market value changes. The following table shows Woori Bank s interest rate VaR with respect to its Won-denominated assets and liabilities for each of the quarters since the fourth quarter of 2017:

	Fourth Quarter 2017	First Quarter 2018	Second Quarter 2018	Third Quarter 2018	Fourth Quarter 2018
	(in billions of Won, except percentages)				
Interest rate VaR	394.5	268.6	211.9	166.6	293.2

The Board Risk Management Committee reviews gap analysis reports, duration gap analysis reports and interest rate limit compliance reports prepared by the Risk Management Department on a quarterly basis.

Foreign Exchange Risk

We manage foreign exchange rate risk arising in connection with the management of our assets and liabilities together with such risks arising from our trading operations. See Market Risk Management for Trading Activities Foreign Exchange Risk above.

Liquidity Risk Management

Liquidity risk is the risk of insolvency or loss due to disparity between inflow and outflow of funds such as maturity mismatch, including having to obtain funds at a high price or to dispose of securities at an unfavorable price due to lack of available funds. We manage our liquidity in order to meet our financial liabilities from withdrawals of deposits, redemption of matured debentures and repayments at maturity of borrowed funds. We also require sufficient liquidity to fund loans and extend other forms of credits, as well as to make investments in securities. Each of the Subsidiary Risk Management Committees establishes liquidity policies for the respective subsidiary and monitors liquidity on an on-going basis. Our relevant subsidiaries make constant adjustments to take into account variables affecting their liquidity levels. The Subsidiary Risk Management Departments review the uses and sources of funds on a daily basis, taking into consideration the various goals of their respective business groups.

Our liquidity management goal is to be able, even under adverse conditions, to meet all our liability repayments on time and fund all investment opportunities even under adverse conditions.

We maintain diverse sources of liquidity to facilitate flexibility in meeting our funding requirements. We fund our 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. We use the majority of funds raised by us to extend loans or purchase securities. Generally, deposits are of shorter average maturity than loans or investments.

In managing liquidity risk, each of our relevant subsidiaries currently determines gap limits, implements those limits and monitors maturity gaps using its asset and liability management system. We also establish gap limits for liquidity management purposes. Each relevant subsidiary has set a total limit in order to manage liquidity risk. For example, Woori Bank s three-month accumulated gap limits for banking and trust accounts are between (10)% and 10%. In the foreign currency account, the limit for a one-week gap has been set as (3)% or higher and as (10)% or higher for a one-month gap.

Liquidity is maintained by holding sufficient quantities of assets that can be liquidated to meet actual or potential demands for funds from depositors and others. Liquidity is also managed by ensuring that the excess of maturing liabilities over maturing assets in any period is kept to manageable levels relative to the amount of funds we believe we can raise when required. We seek to minimize our liquidity costs by managing our liquidity position on a daily basis and by limiting the amount of cash at any time that is not invested in interest-earning assets or securities.

The Financial Services Commission uses the liquidity coverage ratio, defined as the ratio of highly liquid assets to total net cash outflows over a 30-day period, as the principal liquidity risk management measure and currently requires Korean banks, including Woori Bank, to:

- maintain a liquidity coverage ratio of not less than 100% from January 1, 2019 (compared to not less than 95% from January 1, 2018 to December 31, 2018);

- maintain a foreign currency liquidity coverage ratio of not less than 80% from January 1, 2019 (compared to not less than 70% from January 1, 2018 to December 31, 2018); provided, however, that the foreign currency liquidity ratio (defined as the ratio of foreign currency assets due within three months to foreign currency liabilities due within three months) would apply if the amount of foreign currency assets and the ratio of foreign currency liabilities to total liabilities are less than the respective amount and ratio specified under the Bank Act and the regulations thereunder; and

- submit monthly reports with respect to the maintenance of these ratios.

As of December 31, 2018, Woori Bank s 30-day liquidity coverage ratio was 104.08%, above the Financial Services Commission s standard of 100%.

The following table shows the liquidity status, on a cumulative basis, and limits for foreign currency accounts of Woori Bank on a non-consolidated basis as of December 31, 2018 in accordance with the Financial Services Commission s regulations:

	7 days or less	8 days 1 month	3 months or less
		(in millions of US$)	
Foreign currency accounts:			
Foreign currency assets	US$ 14,799	US$ 15,377	US$ 14,341
Foreign currency liabilities	8,073	13,854	14,213
Maturity gap	6,727	1,524	128

Cumulative gap (A)	6,727	8,250	8,378
Total assets (B)	113,468	113,468	113,468
Liquidity gap ratio (A/B)	5.93%	7.27%	123.2%[1]
Limits	(3)%	(10)%	85%

[1] Liquidity ratio, calculated as foreign currency assets as a percentage of foreign currency liabilities.

The Subsidiary Risk Management Committees receive reports from the relevant subsidiaries regarding their respective liquidity ratios and liquidity gap ratios on a monthly basis. Based on those reports, each Subsidiary Risk Management Department reports these results to the Board Risk Management Committee on a quarterly basis.

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Operational Risk Management

Operational risk is difficult to quantify and subject to different definitions. We define our operational risk as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk, but excludes strategic and reputational risk.

To monitor and control operational risks, we maintain a system of comprehensive policies and have put in place a control framework designed to provide a stable and well-managed operational environment throughout our organization. Several bodies are responsible for managing our operational risk, including our Audit and Legal and Compliance Departments and the Subsidiary Risk Management Committees and their respective Subsidiary Risk Management Departments. In order to manage operational risks, we have implemented a multi-step operational risk management process consisting of engaging in risk self-assessment, establishing key risk indicators, operating an early warning system, managing loss data, measuring operational risk capital, monitoring and reporting risks, promoting a strong risk management culture and developing action plans. We have also established policies to change operational risk profiling, select permitted levels of risk, develop action plans and manage results.

We consider legal risk as a part of our operational risk. The uncertainty of the enforceability of the obligations of our customers and counterparties, including foreclosure on collateral, creates legal risk. Legal risk is higher in new areas of business where the law is often untested in the courts although such risk can also increase in our traditional business to the extent that the legal and regulatory landscape in Korea is changing and many new laws and regulations governing the banking industry remain untested. Our relevant subsidiaries legal departments seek to minimize legal risk by using stringent legal documentation, employing procedures designed to ensure that transactions are properly authorized and consulting legal advisers. Each of our relevant subsidiaries internal auditors also review loan documentation to ensure that these are correctly drawn up to withstand scrutiny in court should such scrutiny occur.

In connection with our disaster recovery capabilities, Woori Bank has measures in place to recover data and resume core operations within three hours of any business interruption.

The majority of our information technology systems are operated by our subsidiary, Woori FIS. We currently have a mirror site in operation with respect to Woori Bank which backs up transaction information on a real-time basis. We also have a back-up site in operation with respect to Woori Bank, which backs up transaction information on a daily basis. See Item 3.D. Risk Factors Other risks relating to our business We may experience disruptions, delays and other difficulties from our information technology systems.

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Item 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

Fees and Charges

Under the terms of the deposit agreement, as a holder of our ADSs, you are required to pay the following service fees to the depositary:

Services	Fees
Issuance of ADSs	Up to $0.05 per ADS issued
Cancellation of ADSs	Up to $0.05 per ADS cancelled
Distribution of cash dividends or other cash distributions	Up to $0.05 per ADS held
Distribution of ADSs pursuant to (i) stock dividends or other free stock distributions, or (ii) exercise of the rights to purchase additional ADSs	Up to $0.05 per ADS held
Distribution of securities other than ADSs or rights to purchase additional ADSs	Up to $0.05 per ADS held
ADS services	Up to $0.05 per ADS held on the applicable record date established by the depositary

As a holder of our ADSs, you are also responsible for paying certain fees and expenses such as:

- taxes (including applicable interest and penalties) and other governmental charges;
- fees for the transfer and registration of shares charged by the registrar and transfer agent for the shares in Korea (*i.e.*, upon deposit and withdrawal of shares)
- cable, telex and facsimile transmission and delivery expenses;
- expenses and charges incurred in the conversion of foreign currency;
- fees and expenses incurred in connection with compliance with exchange control regulations and other applicable regulatory requirements; and
- fees and expenses incurred in connection with the delivery or servicing of shares on deposit.

Depositary fees payable upon the issuance and cancellation of ADSs are typically paid to the depositary by the brokers (on behalf of their clients) receiving the newly issued ADSs from the depositary and by the brokers (on behalf of their clients) delivering the ADSs to the depositary for cancellation. The brokers in turn charge these fees to their clients. Depositary fees payable in connection with distributions of cash or securities to ADS holders and the depositary services fee are charged by the depositary to the holders of record of ADSs as of the applicable ADS record date.

The depositary fees payable for cash distributions are generally deducted from the cash being distributed. In the case of distributions other than cash (i.e., stock dividend, rights), the depositary charges the applicable fee to the ADS record date holders concurrent with the distribution. In the case of ADSs registered in the name of the investor (whether certificated or uncertificated in direct registration), the depositary sends invoices to the applicable record date ADS holders. In the case of ADSs held in brokerage and custodian accounts (via the Depository Trust Company, or DTC), the depositary generally collects its fees through the systems provided by DTC (whose nominee is the registered holder of the ADSs held in DTC) from the brokers and custodians holding ADSs in their DTC accounts. The brokers and custodians who hold their clients ADSs in DTC accounts in turn charge their clients accounts the amount of the fees paid to the depositary.

In the event of refusal to pay the depositary fees, the depositary may, under the terms of the deposit agreement, refuse the requested service until payment is received or may set off the amount of the depositary fees from any distribution to be made to such holder of ADSs.

Note that the fees and charges you may be required to pay may vary over time and may be changed by us and by the depositary. You will receive prior notice of such changes.

Fees and Payments from the Depositary to Us

In 2018, pursuant to an agreement with us, the depositary waived, or made payments to third parties of, approximately $18,863 (net of applicable taxes) in the aggregate in connection with proxy process expenses (including printing, postage and distribution expenses), contributions towards investor relations efforts (including investor relations agency fees) and other standard out-of-pocket maintenance costs relating to our ADS facility that were payable by us.

In addition, as part of its service to us, the depositary waives its fees for the standard costs and operating expenses associated with the administration of the ADS facility.

Item 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

Not Applicable

Item 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

Not Applicable

Item 15. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

We have evaluated, with the participation of our chief executive officer and principal financial officer, the effectiveness of our disclosure controls and procedures, as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of December 31, 2018. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. Based upon our evaluation, our chief executive officer and principal financial officer concluded that our disclosure controls and procedures as of December 31, 2018 were effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act, is recorded, processed, summarized and reported, within the time periods specified in the applicable rules and forms, and that it is accumulated and communicated to our management, including our chief executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Management s Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control system was designed to provide reasonable assurance to our management and board of directors regarding the reliability of financial reporting and the preparation and fair presentation of published financial statements in accordance with IFRS as issued by the IASB. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation and may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management maintains a comprehensive system of controls intended to ensure that transactions are executed in accordance with management s authorization, assets are safeguarded, and financial records are reliable. Our management also takes steps to ensure that information and communication flows are effective and to monitor performance, including performance of internal control procedures.

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Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2018 based on the criteria established in the Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission in May 2013.

Based on this assessment, management believes that, as of December 31, 2018, our internal control over financial reporting is effective.

The effectiveness of our internal control over financial reporting as of December 31, 2018 has been audited by Deloitte Anjin LLC, an independent registered public accounting firm, as stated in its report included herein which expressed an unqualified opinion on the effectiveness of our internal control over financial reporting as of December 31, 2018.

Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting during 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. We adopted IFRS 9 effective January 1, 2018 and have updated or modified certain internal controls over financial reporting as a result of the new accounting standard. For additional information regarding IFRS 9 and the impact of its application to our consolidated financial statements, see Note 2-(1)-1) of the notes to our consolidated financial statements included elsewhere in this annual report.

Item 16. RESERVED

Item 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Our board of directors has determined that each of Dong-Woo Chang, Chan-Hyoung Chung and Sung-Tae Ro, our outside directors and members of our Audit Committee, qualifies as an audit committee financial expert and is independent within the meaning of this Item 16A.

Item 16B. CODE OF ETHICS

We have adopted a code of ethics, as defined in Item 16B of Form 20-F under the Exchange Act. Our code of ethics applies to our chief executive officer, principal financial officer and persons performing similar functions as well as to our outside directors and other officers and employees. Our code of ethics is available on our website at *http://www.woorifg.com*. If we amend the provisions of our code of ethics that apply to our chief executive officer and principal financial officer and persons performing similar functions, or if we grant any waiver of such provisions, we will disclose such amendment or waiver on our website at the same address.

Item 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table sets forth the fees billed to us by our independent registered public accountants, Deloitte Anjin LLC, the member firms of Deloitte Touche Tohmatsu Limited, and their respective affiliates (which we refer to collectively as Deloitte), during the fiscal years ended December 31, 2016, 2017 and 2018:

	Year ended December 31,		
	2016	2017	2018
	(in millions of Won)		
Audit fees	3,405	3,590	4,173
Audit-related fees	121		157
Tax fees	170	169	195
All other fees			53
Total fees	3,696	3,759	4,578

Audit fees in the above table are the aggregate fees billed or expected to be billed by Deloitte in connection with the audit of our annual financial statements, the review of our interim financial statements, the review of filings with the U.S. Securities and Exchange Commission and audit of the effectiveness of our internal control over financial reporting.

Audit-related fees in the above table are the aggregate fees billed or expected to be billed by Deloitte for agreed-upon procedures related to the issuance of comfort letters in connection with the issuance of debt securities.

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Tax fees in the above table are fees billed or expected to be billed by Deloitte for assistance in the preparation of certain tax returns and other tax advice.

Audit Committee Pre-Approval Policies and Procedures

Our Audit Committee pre-approves all audit services to be provided by Deloitte Anjin LLC, our independent auditors. Our Audit Committee s policy regarding the pre-approval of non-audit services to be provided to us by our independent auditors is that all such services shall be pre-approved by our Audit Committee. Non-audit services that are prohibited to be provided to us by our independent auditors under the rules of the SEC and applicable law may not be pre-approved. In addition, prior to the granting of any pre-approval, our Audit Committee must be satisfied that the performance of the services in question will not compromise the independence of our independent auditors. Our Audit Committee also pre-approves the selection or replacement of the independent auditors of our subsidiaries.

Our Audit Committee did not pre-approve any non-audit services under the *de minimis* exception of Rule 2-01(c)(7)(i)(C) of Regulation S-X as promulgated by the U.S. Securities and Exchange Commission.

Item 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Not Applicable

Item 16E. PURCHASE OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

Except as described below, neither we nor any affiliated purchaser, as defined in Rule 10b-18(a)(3) of the Exchange Act, purchased any of our equity securities during the period covered by this annual report.

In connection with the comprehensive stock transfer pursuant to which we were established as a new financial holding company in January 2019, the shareholders of Woori Bank were entitled to exercise appraisal rights with respect to its common stock held by them, at a purchase price of 16,079 per share, in accordance with Korean law. The period for exercise of appraisal rights started on December 28, 2018 and ended on January 7, 2019, during which such shareholders exercised appraisal rights with respect to an aggregate of 11,453,702 shares of common stock of Woori Bank. The payment of the purchase price for such common stock held by the exercising shareholders was made by Woori Bank on January 9, 2019, in the aggregate amount of 184 billion. Such shares of Woori Bank common stock were exchanged for shares of our common stock in the stock transfer and subsequently sold to institutional investors in a block trade in March 2019. See Item 4.A. History and Development of the Company Establishment of Woori Financial Group.

Item 16F. CHANGE IN REGISTRANT S CERTIFYING ACCOUNTANT

Not Applicable

Item 16G. CORPORATE GOVERNANCE

Differences in Corporate Governance Practices

Pursuant to the rules of the New York Stock Exchange applicable to foreign private issuers like us that are listed on the New York Stock Exchange, we are required to disclose significant differences between the New York Stock Exchange s corporate governance standards and those that we follow under Korean law. The following is a summary of such significant differences.

NYSE Corporate Governance Standards	Woori Financial Group
Director Independence Listed companies must have a majority of independent directors.	The majority of our board of directors is independent (as defined in accordance with the New York Stock Exchange s standards), as five of our seven directors are outside directors.

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Executive Session	
Non-management directors must meet in regularly scheduled executive sessions without management. Independent directors should meet alone in an executive session at least once a year.	Our outside directors hold quarterly meetings, which coincide with the quarterly Audit Committee meetings, to discuss matters relating to management issues. The Audit Committee consists of three outside directors.
Nomination/Corporate Governance Committee	
A nomination/corporate governance committee of independent directors is required. The committee must have a charter that addresses the purpose, responsibilities (including development of corporate governance guidelines) and annual performance evaluation of the committee.	We have established a Committee for Recommending Executive Officer Candidates, which consists of five outside directors.
Compensation Committee	
A compensation committee of independent directors is required. The committee must have a charter that addresses the purpose, responsibilities and annual performance evaluation of the committee. The charter must be made available on the company s website. In addition, in accordance with the SEC rules adopted pursuant to Section 952 of the Dodd-Frank Act, NYSE listing standards were amended to expand the factors relevant in determining whether a committee member has a relationship to the company that will materially affect that member s duties to the compensation committee.	We have established a Compensation Committee consisting of one non-standing director and five outside directors.
Additionally, the committee may obtain or retain the advice of a compensation adviser only after taking into consideration all factors relevant to determining that adviser s independence from management.	
Audit Committee	
Listed companies must have an audit committee that satisfies the independence and other requirements of Rule 10A-3 under the Exchange Act. All members must be independent. The committee must have a charter addressing the committee s purpose, an annual performance evaluation of the committee, and the duties and responsibilities of the committee. The charter must be made available on the company s website.	We have established an Audit Committee consisting of three outside directors, all of whom are independent. Accordingly, we are in compliance with Rule 10A-3 under the Exchange Act.
Audit Committee Additional Requirements	
Listed companies must have an audit committee that is composed of at least three directors.	Our Audit Committee has three members, as described above.
Shareholder Approval of Equity Compensation Plan	
Listed companies must allow its shareholders to exercise their voting rights with respect to any material revision to the company s equity compensation plan.	We currently have one equity compensation plan, providing for the grant of stock options to officers and directors.

	All material matters related to the granting of stock options are provided in our articles of incorporation, and any amendments to the articles of incorporation are subject to shareholders approval.
Corporate Governance Guidelines Listed companies must adopt and disclose corporate governance guidelines.	We have adopted corporate governance standards, the Korean-language version of which is available on our website.

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Code of Business Conduct and Ethics	
Listed companies must adopt and disclose a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers.	We have adopted a Code of Ethics and Business Conduct for Employees, the Korean-language version of which is available on our website.

Item 16H. MINE SAFETY DISCLOSURE

Not Applicable

Item 17. FINANCIAL STATEMENTS

Not Applicable

Item 18. FINANCIAL STATEMENTS

Reference is made to Item 19(a) for a list of all financial statements filed as part of this annual report.

Item 19. EXHIBITS

(a) List of financial statements:

	Page
Audited consolidated financial statements of Woori Financial Group Inc. (successor issuer of Woori Bank) and subsidiaries prepared in accordance with IFRS as issued by the IASB	

(b) Exhibits

Pursuant to the rules and regulations of the U.S. Securities and Exchange Commission, we have filed certain agreements as exhibits to this Annual Report on Form 20-F. These agreements may contain representations and warranties made by the parties. These representations and warranties have been made solely for the benefit of the other party or parties to such agreements and (i) may be intended not as statements of fact, but rather as a way of allocating the risk to one of the parties to such agreements if those statements turn out to be inaccurate, (ii) may have been qualified by disclosures that were made to such other party or parties and that either have been reflected in the company s filings or are not required to be disclosed in those filings, (iii) may apply materiality standards different from what may be viewed as material to investors and (iv) were made only as of the date of such agreements or such other date(s) as may be specified in such agreements and are subject to more recent developments. Accordingly, these representations and warranties may not describe our actual state of affairs at the date of this annual report.

Number	Description
1.1*	Articles of Incorporation of Woori Financial Group (translation in English).
2.1	Form of Stock Certificate of Woori Financial Group s common stock, par value 5,000 per share (translation in English).
2.2**	Form of the Second Amended and Restated Deposit Agreement by and among Woori Financial Group, Citibank, N.A., as depositary, and all holders and beneficial owners from time to time of American depositary shares issued thereunder, including the form of American depositary receipt.

Number	Description
4.1***	Agreement between the Korea Deposit Insurance Corporation and Woori Bank in Connection with the Sale of Woori Bank Shares (translation in English).
8.1****	List of subsidiaries of Woori Bank.
11.1	Code of Ethics (translation in English).
12.1	Section 302 certifications.
13.1	Section 906 certifications.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Incorporated by reference to Attachment A of Annex I to the prospectus which is part of Amendment No. 2 to the Registration Statement on Form F-4 (File No. 333-226345), filed on November 9, 2018.

** Incorporated by reference to exhibit (a)(1) to the Registration Statement on Form F-6 (File No. 333-229197), filed on January 11, 2019.

*** Incorporated by reference to exhibit 4.1 to the Annual Report on Form 20-F (File No. 001-31811), filed on April 27, 2017.

**** Incorporated by reference to Note 1 of the notes to the consolidated financial statements of the registrant included in this Annual Report.

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SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

Woori Financial Group Inc.

(Registrant)

/s/ Tae-Seung Sohn
(Signature)

Tae-Seung Sohn
Chief Executive Officer
(Name/Title)

Date: April 30, 2019

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of

Woori Financial Group Inc.:

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Woori Financial Group Inc. (successor issuer of Woori Bank) and subsidiaries (the Group) as of December 31, 2018, based on criteria established in *Internal Control Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Group maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2018 of the Group and our report dated April 30, 2019, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management s Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Group s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Group in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE ANJIN LLC

Seoul, Korea

April 30, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Woori Financial Group Inc.:

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of the financial position of Woori Financial Group Inc. (successor issuer of Woori Bank) and subsidiaries (the Group) as of December 31, 2017 and 2018, the related consolidated statements of comprehensive income, changes in equity, and cash flows for each of the three years in the period ended December 31, 2018 (all expressed in Korean Won), and the related notes (collectively referred to as the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Group as of December 31, 2017 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Group s internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated April 30, 2019, expressed an unqualified opinion on the Group s internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Group s management. Our responsibility is to express an opinion on the Group s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Group in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ DELOITTE ANJIN LLC

Seoul, Korea

April 30, 2019

We have served as the Company s auditor since 2002.

WOORI FINANCIAL GROUP INC. (SUCCESSOR ISSUER OF WOORI BANK) AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

AS OF DECEMBER 31, 2017 AND 2018

	Korean Won		U.S. Dollars
	December 31, 2017(*)	December 31, 2018(*)	December 31, 2018(*)
	(in millions)		(in thousands) (Note 2)
ASSETS			
Cash and cash equivalents (Note 6)	6,908,286	6,747,894	6,063,343
Financial assets at fair value through profit or loss (FVTPL) (IFRS 9) (Notes 4, 7, 11, 12 and 26)		6,126,316	5,504,822
Financial assets at FVTPL (IAS 39) (Notes 4, 7, 11, 12, 18 and 26)	5,843,077		
Financial assets at financial assets at fair value through other comprehensive income (FVTOCI) (Notes 4, 8, 11, 12, and 18)		18,063,423	16,230,949
Available-for-sale (AFS) financial assets (Notes 4,8,11,12 and 18)	15,352,950		
Securities at amortized cost (Notes 4, 9, 11, 12 and 18)		22,932,559	20,606,127
Held to maturity (HTM) financial assets (Notes 4, 9, 11, 12 and 18)	16,749,296		
Loans and other financial assets at amortized cost (Notes 4, 10, 11, 12, 18 and 44)		282,457,578	253,803,197
Loans and receivables (Notes 4,10,11,12,18 and 44)	267,106,204		
Investments in joint ventures and associates (Note 13)	417,051	361,766	325,066
Investment properties (Note 14)	371,301	378,196	339,829
Premises and equipment (Notes 15 and 18)	2,477,545	2,450,492	2,201,898
Intangible assets and goodwill (Note 16)	518,599	597,520	536,904
Assets held for sale (Note 17)	48,624	17,912	16,095
Current tax assets (Note 41)	4,722	20,730	18,627
Deferred tax assets (Note 41)	280,130	59,641	53,590
Derivative assets (Designated for hedging) (Notes 4,11,12 and 26)	59,272	35,503	31,901
Other assets (Notes 19 and 44)	158,404	197,653	177,602
Total assets	316,295,461	340,447,183	305,909,950
LIABILITIES			
Financial liabilities at FVTPL (IFRS 9) (Notes 4, 11, 12, 20 and 26)		2,282,686	2,051,115
Financial liabilities at FVTPL (IAS 39) (Notes 4, 11, 12, 20 and 26)	3,427,909		
Deposits due to customers (Notes 4,11,21 and 44)	234,695,084	248,690,939	223,462,071
Borrowings (Notes 4, 11, 12 and 22)	14,784,706	16,202,986	14,559,247
Debentures (Notes 4, 11 and 22)	27,869,651	28,735,862	25,820,704

Provisions (Notes 23, 43 and 44)	410,470	391,313	351,616
Net defined benefit liability (Note 24)	43,264	173,109	155,548
Current tax liabilities (Note 41)	232,600	159,078	142,940
Deferred tax liabilities (Note 41)	22,681	18,156	16,314
Derivative liabilities (Designated for hedging) (Notes 4,11,12 and 26)	67,754	51,408	46,193
Other financial liabilities (Notes 4,11,12, 25 and 44)	13,892,461	21,442,524	19,267,251
Other liabilities (Notes 25 and 44)	283,981	346,078	310,969
Total liabilities	295,730,561	318,494,139	286,183,968
EQUITY			
Owners equity:	20,365,892	21,739,931	19,534,488
Capital stock (Note 28)	3,381,392	3,381,392	3,038,361
Hybrid securities (Note 29)	3,017,888	3,161,963	2,841,192
Capital surplus (Note 28)	285,880	285,889	256,887
Other equity (Note 30)	(1,939,274)	(2,213,970)	(1,989,370)
Retained earnings (Note 31)	15,620,006	17,124,657	15,387,418
Non-controlling interests	199,008	213,113	191,494
Total equity	20,564,900	21,953,044	19,725,982
Total liabilities and equity	316,295,461	340,447,183	305,909,950

(*) The consolidated statements of financial position as of December 31, 2018 were prepared in accordance with IFRS 9; however, the comparative consolidated statements of financial position as of December 31, 2017 were not retrospectively restated in accordance with IFRS 9.

See accompanying notes

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WOORI FINANCIAL GROUP INC. (SUCCESSOR ISSUER OF WOORI BANK) AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

FOR THE YEARS ENDED DECEMBER 31, 2016, 2017 AND 2018

	Korean Won			U.S. Dollars
	2016(*)	2017(*)	2018(*)	2018(*)
	(in millions, except per share data)			(in thousands, except per share data) (Note 2)
Interest income	8,512,312	8,550,687	9,684,499	8,702,038
Financial assets at FVTPL (IFRS 9)			54,243	48,740
Financial assets at FVTOCI			280,371	251,928
Financial assets at amortized cost			9,349,885	8,401,370
Financial assets at FVTPL (IAS 39)	63,408	53,348		
AFS financial assets	339,518	239,030		
HTM financial assets	360,054	307,965		
Loans and receivables	7,749,332	7,950,344		
Interest expense	(3,492,768)	(3,330,037)	(4,033,548)	(3,624,358)
Net interest income (Notes 11, 33 and 44)	**5,019,544**	**5,220,650**	**5,650,951**	**5,077,680**
Fees and commissions income	1,865,470	2,069,198	1,680,764	1,510,256
Fees and commissions expense	(928,339)	(998,732)	(610,790)	(548,827)
Net fees and commissions income (Notes 11, 34 and 44)	**937,131**	**1,070,466**	**1,069,974**	**961,429**
Dividend income (Notes 35 and 44)	184,510	124,992	90,552	81,366
Net gain on financial instruments at FVTPL (IFRS 9) (Notes 11, 36 and 44)			214,443	192,689
Net gain (loss) on financial instruments at FVTPL (IAS 39) (Notes 11, 36 and 44)	114,387	(104,827)		
Net gain on financial assets at FVTOCI (Notes 11 and 37)			2,047	1,840
Net gain (loss) on AFS financial assets (Notes 11 and 37)	(1,035)	192,708		
Net gain on disposals of financial assets at amortized cost (Note 11)			79,532	71,463
Net gain on disposals of securities at amortized cost			431	387
Net gain on disposals of loans and other financial assets at amortized cost			79,101	71,076
Impairment losses due to credit loss (Notes 11, 38 and 44)	(834,076)	(785,133)	(329,574)	(296,140)
General and administrative expenses (Notes 39 and 44)	(3,478,476)	(3,530,801)	(3,624,033)	(3,256,387)
Other net operating expenses (Notes 39 and 44)	(367,779)	(31,313)	(394,591)	(354,561)

Operating income	**1,574,206**	**2,156,742**	**2,759,301**	**2,479,379**
Share of gain(loss) on subsidiaries and associates (Note 13)	(19,507)	(101,514)	3,019	2,713
Net other non-operating income (expenses)	(1,310)	(105,722)	42,552	38,235
Non-operating income (expenses) (Note 40)	**(20,817)**	**(207,236)**	**45,571**	**40,948**
Net income before income tax expense	**1,553,389**	**1,949,506**	**2,804,872**	**2,520,327**
Income tax expense (Note 41)	(275,856)	(419,418)	(753,223)	(676,811)
Net income	**1,277,533**	**1,530,088**	**2,051,649**	**1,843,516**

(Continued)

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WOORI FINANCIAL GROUP INC. (SUCCESSOR ISSUER OF WOORI BANK) AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (CONTINUED)

FOR THE YEARS ENDED DECEMBER 31, 2016, 2017 AND 2018

	Korean Won			U.S. Dollars
	2016(*)	**2017(*)**	**2018(*)**	**2018(*)**
	(in millions, except per share data)			**(in thousands, except per share data) (Note 2)**
Net loss on valuation of equity securities at FVTOCI			(30,855)	(27,724)
Net gain on valuation of financial liabilities designated as at FVTPL due to own credit risk			100	90
Items out of share of other comprehensive gain of joint ventures and associates that will not be reclassified to profit or loss		(2,993)		
Remeasurement gain (loss) related to defined benefit plan	34,162	10,497	(84,629)	(76,043)
Items that will not be reclassified to profit or loss	**34,162**	**7,504**	**(115,384)**	**(103,677)**
Net gain (loss) on valuation of debt securities at FVTOCI			33,360	29,976
Net gain (loss) on valuation of AFS financial assets	12,586	(84,498)		
Share of other comprehensive gain (loss) of joint ventures and associates	(7,937)	3,605	2,958	2,658
Net loss on foreign currency translation of foreign operations	28,712	(208,329)	(4,379)	(3,934)
Net gain (loss) on valuation of cash flow hedge	10,371	777	(4,646)	(4,175)
Other comprehensive income related to assets held for sale		4,145	(4,145)	(3,725)
Items that may be reclassified to profit or loss	**43,732**	**(284,300)**	**23,148**	**20,800**
Other comprehensive income (loss), net of tax	**77,894**	**(276,796)**	**(92,236)**	**(82,877)**
Total comprehensive income	**1,355,427**	**1,253,292**	**1,959,413**	**1,760,639**
Net income attributable to:				
Net income attributable to owners	1,261,266	1,512,148	2,033,182	1,826,922
Net income attributable to non-controlling interests	16,267	17,940	18,467	16,594
Total comprehensive income attributable to:				
Comprehensive income attributable to owners	1,332,614	1,249,057	1,943,885	1,746,686
Comprehensive income attributable to non-controlling interests	22,813	4,235	15,528	13,953
Net income per share (Note 42)				
Basic and diluted earnings per share (Unit: Korean Won and U.S. Dollar)	1,567	1,999	2,796	2.512

(*) The consolidated statements of comprehensive income for the year ended December 31, 2018 were prepared in accordance with IFRS 9; however, the comparative consolidated statements of comprehensive income for the years ended December 31, 2016 and 2017 were not retrospectively restated in accordance with IFRS 9.

See accompanying notes

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WOORI FINANCIAL GROUP INC. (SUCCESSOR ISSUER OF WOORI BANK) AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

FOR THE YEARS ENDED DECEMBER 31, 2016, 2017 AND 2018

	Capital stock	Hybrid securities	Capital surplus	Other equity	Retained earnings	Owners equity	Non-controlling interests	Total equity
				(Korean Won in millions)				
January 1, 2016	3,381,392	3,334,002	294,259	(1,547,303)	13,726,122	19,188,472	121,443	19,309,915
Net income					1,261,266	1,261,266	16,267	1,277,533
Dividends to common stocks					(168,317)	(168,317)	(1,286)	(169,603)
Changes in equity of subsidiaries			(7,928)	7,930		2		2
Changes in non-controlling interests due to acquisition of subsidiary							16,823	16,823
Net gain on valuation of available-for-sale financial assets				12,296		12,296	290	12,586
Changes in equity of joint ventures and associates				(7,937)		(7,937)		(7,937)
Gain on foreign currency translation of foreign operations				22,436		22,436	6,276	28,712
Gain on valuation of cash flow hedge				10,371		10,371		10,371
Remeasurement gain (loss) related to defined benefit plan				34,182		34,182	(20)	34,162
Dividends to hybrid securities					(206,515)	(206,515)		(206,515)
		549,904				549,904		549,904

Issuance of hybrid securities								
Redemption of hybrid securities		(309,010)			(990)	(310,000)		(310,000)
December 31, 2016(*)	3,381,392	3,574,896	286,331	(1,468,025)	14,611,566	20,386,160	159,793	20,545,953

	Capital stock	**Hybrid securities**	**Capital surplus**	**Other equity**	**Retained earnings**	**Owners equity**	**Non-controlling interests**	**Total equity**
				(Korean Won in millions)				
January 1, 2017	3,381,392	3,574,896	286,331	(1,468,025)	14,611,566	20,386,160	159,793	20,545,953
Net income					1,512,148	1,512,148	17,940	1,530,088
Dividends to common stocks					(336,636)	(336,636)	(1,554)	(338,190)
Capital increase of subsidiaries			(451)			(451)	36,534	36,083
Net gain (loss) on valuation of available-for-sale financial assets				(85,051)		(85,051)	553	(84,498)
Changes in equity of joint ventures and associates				612		612		612
Loss on foreign currency translation of foreign operations				(194,347)		(194,347)	(13,982)	(208,329)
Gain on valuation of cash flow hedge				777		777		777
Remeasurement gain (loss) related to defined benefit plan				10,773		10,773	(276)	10,497
Other comprehensive income related to assets held for sale				4,145		4,145		4,145
Dividends to hybrid securities					(167,072)	(167,072)		(167,072)
Issuance of hybrid securities		559,565				559,565		559,565
Redemption of hybrid securities		(1,116,573)		(208,158)		(1,324,731)		(1,324,731)

December 31, 2017(*)	3,381,392	3,017,888	285,880	(1,939,274)	15,620,006	20,365,892	199,008	20,564,900

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WOORI FINANCIAL GROUP INC. (SUCCESSOR ISSUER OF WOORI BANK) AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (CONTINUED)

FOR THE YEARS ENDED DECEMBER 31, 2016, 2017 AND 2018

	Capital stock	Hybrid securities	Capital surplus	Other equity	Retained earnings	Owners equity	Non-controlling interests	Total equity
				(Korean Won in millions)				
January 1, 2018	3,381,392	3,017,888	285,880	(1,939,274)	15,620,006	20,365,892	199,008	20,564,900
Cumulative effect of change in accounting policy (Note 2)				(392,176)	177,091	(215,085)	723	(214,362)
Adjusted balance, beginning of period	3,381,392	3,017,888	285,880	(2,331,450)	15,797,097	20,150,807	199,731	20,350,538
Net income					2,033,182	2,033,182	18,467	2,051,649
Dividends to common stocks					(336,636)	(336,636)	(2,128)	(338,764)
Changes in equity of subsidiaries			9			9	(18)	(9)
Net gain on valuation of financial liabilities designated as at FVTPL due to own credit risk				100		100		100
Changes in other comprehensive income due to redemption of financial liabilities designated as at FVTPL				(4)	4			
Net gain (loss) on valuation of financial assets at FVTOCI				2,733		2,733	(228)	2,505

Changes in other comprehensive income due to disposal of equity securities at FVTOCI				(1,009)	1,009			
Share of other comprehensive gain (loss) of joint ventures and associates				2,958	(10,647)	(7,689)		(7,689)
Loss on foreign currency translation of foreign operations				(1,929)		(1,929)	(2,450)	(4,379)
Loss on valuation of cash flow hedge				(4,646)		(4,646)		(4,646)
Remeasurement loss related to defined benefit plan				(84,368)		(84,368)	(261)	(84,629)
Other comprehensive income related to assets held for sale				(4,145)		(4,145)		(4,145)
Dividends to hybrid securities					(151,194)	(151,194)		(151,194)
Issuance of hybrid securities		398,707				398,707		398,707
Redemption of hybrid securities		(254,632)		(368)		(255,000)		(255,000)
Appropriation of retained earnings				208,158	(208,158)			
December 31, 2018(*)	3,381,392	3,161,963	285,889	(2,213,970)	17,124,657	21,739,931	213,113	21,953,044

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WOORI FINANCIAL GROUP INC. (SUCCESSOR ISSUER OF WOORI BANK) AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (CONTINUED)

FOR THE YEARS ENDED DECEMBER 31, 2016, 2017 AND 2018

	Capital stock	Hybrid securities	Capital surplus	Other equity	Retained earnings	Owners equity	Non-controlling interests	Total equity
	(U.S. Dollars in thousands)							
January 1, 2018	3,038,361	2,711,733	256,878	(1,742,542)	14,035,408	18,299,838	178,819	18,478,657
Cumulative effect of change in accounting policy (Note 2)				(352,390)	159,126	(193,264)	650	(192,614)
Adjusted balance, beginning of period	3,038,361	2,711,733	256,878	(2,094,932)	14,194,534	18,106,574	179,469	18,286,043
Net income					1,826,922	1,826,922	16,594	1,843,516
Dividends to common stocks					(302,485)	(302,485)	(1,912)	(304,397)
Changes in equity of subsidiaries			9			9	(16)	(7)
Net gain on valuation of financial liabilities designated as at FVTPL due to own credit risk				90		90		90
Changes in other comprehensive income due to redemption of financial liabilities designated as at FVTPL				(4)	4			
Net gain (loss) on valuation of financial assets at FVTOCI				2,456		2,456	(205)	2,251

Changes in other comprehensive income due to disposal of equity securities at FVTOCI				(907)	907			
Share of other comprehensive gain (loss) of joint ventures and associates				2,658	(9,567)	(6,909)		(6,909)
Loss on foreign currency translation of foreign operations				(1,733)		(1,733)	(2,201)	(3,934)
Loss on valuation of cash flow hedge				(4,175)		(4,175)		(4,175)
Remeasurement loss related to defined benefit plan				(75,808)		(75,808)	(235)	(76,043)
Other comprehensive income related to assets held for sale				(3,725)		(3,725)		(3,725)
Dividends to hybrid securities					(135,856)	(135,856)		(135,856)
Issuance of hybrid securities		358,259				358,259		358,259
Redemption of hybrid securities		(228,800)		(331)		(229,131)		(229,131)
Appropriation of retained earnings				187,041	(187,041)			
December 31, 2018(*)	3,038,361	2,841,192	256,887	(1,989,370)	15,387,418	19,534,489	191,494	19,725,982

(*) The consolidated statements of changes in equity for the year ended December 31, 2018 were prepared in accordance with IFRS 9; however, the comparative consolidated statements of changes in equity for the years ended December 31, 2016 and 2017 were not retrospectively restated in accordance with IFRS 9.

See accompanying notes

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WOORI FINANCIAL GROUP INC. (SUCCESSOR ISSUER OF WOORI BANK) AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31, 2016, 2017 AND 2018

	2016(*)	Korean Won 2017(*) (in millions)	2018(*)	U.S. Dollars 2018(*) (in thousands) (Note 2)
Cash flows from operating activities:				
Net income	1,277,533	1,530,088	2,051,649	1,843,516
Adjustments to net income:				
Income tax expense	275,856	419,418	753,223	676,811
Interest income	(8,512,312)	(8,550,687)	(9,684,499)	(8,702,038)
Interest expense	3,492,768	3,330,037	4,033,548	3,624,358
Dividend income	(184,510)	(124,992)	(90,552)	(81,366)
	(4,928,198)	(4,926,224)	(4,988,280)	(4,482,235)
Additions of expenses not involving cash outflows:				
Impairment losses due to credit loss	834,076	785,133	329,574	296,140
Loss on valuation of financial instruments at FVTPL		15,267		
Loss on available-for-sale financial assets	1,035			
Loss on financial assets at FVTOCI			1,053	946
Share of losses of investments in joint ventures and associates	56,264	185,020	22,772	20,462
Loss on disposal of investments in joint ventures and associates	15,060	38,713	2,931	2,634
Loss on transaction and valuation of derivatives (Designated for hedging)	98,981	109,569	36,483	32,782
Loss on hedged items (fair value hedge)	475		17,299	15,544
Loss on provision	34,774	107,028	28,350	25,474
Retirement benefits	152,609	142,902	142,712	128,234
Depreciation and amortization	252,031	235,795	272,550	244,901
Loss on disposal of premises and equipment, intangible assets and other assets	9,718	9,994	1,160	1,042
Impairment loss on premises and equipment, intangible assets and other assets	1,936	390	87	78
	1,456,959	1,629,811	854,971	768,237
Deductions of income not involving cash inflows:				
Gain on valuation of financial assets at FVTPL (IFRS 9)			(215,711)	(193,828)
Gain on valuation of financial assets at FVTPL (IAS 39)	(75,690)			
Gain on redemption of debentures			(1,597)	(1,435)

Gain on financial assets at FVTOCI			(3,100)	(2,786)
Gain on AFS financial assets		(192,708)		
Gain on disposal of securities at amortized cost			(431)	(387)
Share of gains of investments in joint ventures and associates	(36,757)	(83,506)	(25,791)	(23,175)
Gain on disposal of investments in joint ventures and associates	(23,457)	(39,932)	(50,511)	(45,387)
Gain on transaction and valuation of derivatives (Designated for hedging)	(130)	(122)	(35,810)	(32,177)
Gain on hedged items (fair value hedge)	(99,302)	(53,532)	(42,797)	(38,455)
Reversal on provisions	(1,396)	(2,567)	(2,014)	(1,810)
Gain on disposal of premises and equipment, intangible assets and other assets	(1,885)	(5,028)	(30,278)	(27,206)
Reversal of impairment loss on premises and equipment, intangible assets and other assets	(3,581)	(666)	(761)	(684)
	(242,198)	(378,061)	(408,801)	(367,330)

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WOORI FINANCIAL GROUP INC. (SUCCESSOR ISSUER OF WOORI BANK) AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

FOR THE YEARS ENDED DECEMBER 31, 2016, 2017 AND 2018

	Korean Won			U.S. Dollars
	2016(*)	2017(*) (in millions)	2018(*)	2018(*) (in thousands) (Note 2)
Changes in operating assets and liabilities:				
Financial assets at FVTPL (IFRS 9)			670,872	602,814
Financial instruments at FVTPL (IAS 39)	(99,581)	(583,068)		
Loans and other financial assets at amortized cost			(15,718,714)	(14,124,103)
Loans and receivables	(14,433,390)	(9,647,563)		
Other assets	219,323	35,953	32,328	29,048
Deposits due to customers	11,878,628	13,634,873	13,995,747	12,575,925
Provisions	34,376	(122,711)	(11,920)	(10,711)
Net defined benefit liability	(261,097)	(46,789)	(135,313)	(121,586)
Other financial liabilities	5,158,055	(7,966,786)	7,411,617	6,659,733
Other liabilities	(6,163)	(27,550)	96,900	87,070
	2,490,151	(4,723,641)	6,341,517	5,698,190
Cash received from operating activities:				
Interest income received	8,511,349	8,570,715	9,617,201	8,641,568
Interest expense paid	(3,593,358)	(3,404,608)	(3,847,275)	(3,456,982)
Dividends received	184,674	127,343	90,651	81,455
Income tax paid	(251,627)	(404,428)	(551,560)	(495,606)
	4,851,038	4,889,022	5,309,017	4,770,435
Net cash provided by (used in) operating activities	4,905,285	(1,979,005)	9,160,073	8,230,813
Cash flows from investing activities:				
Cash in-flows from investing activities:				
Disposal of financial assets at FVTPL (IFRS 9)			11,919,335	10,710,158
Disposal of financial assets at FVTOCI			9,146,307	8,218,445
Disposal of AFS financial assets	20,395,744	24,912,752		
Redemption of securities at amortized cost			9,426,757	8,470,444
Redemption of HTM financial assets	8,462,346	8,587,092		
Disposal of investments in joint ventures and associates	97,135	70,180	51,435	46,217
Disposal of subsidiaries		203		
Disposal of investment properties		418	3,512	3,156
Disposal of premises and equipment	63	7,428	5,545	4,982

Disposal of intangible assets	4,325	1,188	9,199	8,266
Disposal of assets held for sale	22,723	24,808	80,347	72,196
	28,982,336	33,604,069	30,642,437	27,533,864

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WOORI FINANCIAL GROUP INC. (SUCCESSOR ISSUER OF WOORI BANK) AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

FOR THE YEARS ENDED DECEMBER 31, 2016, 2017 AND 2018

	2016(*)	Korean Won 2017(*) (in millions)	2018(*)	U.S. Dollars 2018(*) (in thousands) (Note 2)
Cash out-flows from investing activities:				
Net cash in-flows of business combination	(132,301)		(134,967)	(121,275)
Acquisition of financial assets at FVTPL (IFRS 9)			(12,322,160)	(11,072,118)
Acquisition of financial assets at FVTOCI			(13,275,429)	(11,928,681)
Acquisition of AFS financial assets	(23,844,849)	(19,674,346)		
Acquisition of securities at amortized cost			(15,622,847)	(14,037,961)
Acquisition of HTM financial assets	(8,818,376)	(11,521,065)		
Acquisition of investments in joint ventures and associates	(43,281)	(143,161)	(48,272)	(43,375)
Acquisition of investment properties	(4,428)	(9,872)	(15,195)	(13,654)
Acquisition of premises and equipment	(131,009)	(162,245)	(118,668)	(106,630)
Acquisition of intangible assets	(191,161)	(195,929)	(176,067)	(158,206)
Cash out-flow related to derivatives designated for hedging	(42,544)	(13,742)		
	(33,207,949)	(31,720,360)	(41,713,605)	(37,481,900)
Net cash provided by (used in) investing activities	(4,225,613)	1,883,709	(11,071,168)	(9,948,036)
Cash flows from financing activities:				
Cash in-flows from financing activities:				
Increase in borrowings	8,259,380	9,057,999	9,606,126	8,631,617
Issuance of debentures	15,848,055	18,438,221	21,505,849	19,324,152
Issuance of hybrid securities	549,904	559,565	398,707	358,259
Capital increase of subsidiaries		35,841		
	24,657,339	28,091,626	31,510,682	28,314,028
Cash out-flows from financing activities:				
Repayment of borrowings	(9,524,626)	(12,692,883)	(8,349,005)	(7,502,026)
Repayment of debentures	(14,118,720)	(13,620,520)	(20,903,518)	(18,782,926)
Payment of dividends to common stocks	(168,317)	(336,636)	(336,636)	(302,485)
Dividends paid on hybrid securities	(201,328)	(177,730)	(147,625)	(132,648)
Redemption of hybrid securities	(310,000)	(1,323,400)	(255,000)	(229,131)
Dividends paid on non-controlling interests	(1,286)	(1,554)	(2,128)	(1,912)

	(24,324,277)	(28,152,723)	(29,993,912)	(26,951,128)
Net cash provided by (used in) financing activities	333,062	(61,097)	1,516,770	1,362,900
Net increase (decrease) in cash and cash equivalents	1,012,734	(156,393)	(394,325)	(354,323)
Cash and cash equivalents, beginning of the period	6,644,055	7,591,324	6,908,286	6,207,463
Effects of exchange rate changes on cash and cash equivalents	(65,465)	(526,645)	233,933	210,203
Cash and cash equivalents, end of the period (Note 6)	7,591,324	6,908,286	6,747,894	6,063,343

(*) The consolidated statements of cash flows for the year ended December 31, 2018 were prepared in accordance with IFRS 9; however, the comparative consolidated statements of cash flows for the years ended December 31, 2016 and 2017 were not retrospectively restated to apply IFRS 9.

See accompanying notes

WOORI FINANCIAL GROUP INC. (SUCCESSOR ISSUER OF WOORI BANK) AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2016, 2017 AND 2018

1. GENERAL

(1) Summary of the parent company

Effective as of January 11, 2019, Woori Financial Group Inc. (Woori Financial Group) was established as the financial holding company of Woori Bank (hereinafter referred to as the Bank or Woori Bank), and Woori Bank became a wholly-owned subsidiary of Woori Financial Group, pursuant to a comprehensive stock transfer under Article 360-15 of the Korean Commercial Code (the Stock Transfer). In the Stock Transfer, holders of Woori Bank common stock transferred all of their shares to Woori Financial Group and in return received shares of the common stock of Woori Financial Group. The Stock Transfer constitutes a succession for purposes of Rule 12g-3(a) under the Securities Exchange Act of 1934, as amended (the Exchange Act), such that the common stock of Woori Financial Group is deemed to be registered under Section 12(b) of the Exchange Act by operation of Rule 12g-3(a). This Form 15 relates solely to the common stock, American depositary shares representing such common stock and reporting obligations of Woori Bank under the Exchange Act. As the successor issuer to Woori Bank, Woori Financial Group will hereafter file reports under the Exchange Act with the U.S. Securities and Exchange Commission using the commission file number of Woori Bank (001-31811).

As part of the comprehensive stock transfer as of January 11, 2019, Woori Bank became a wholly owned subsidiary of Woori Financial Group and transferred the ownership of five of its subsidiaries to Woori Financial Group. These companies were Woori FIS Co., Ltd., Woori Finance Research Institute Co., Ltd., Woori Credit Information Co., Ltd., Woori Fund Service Co., Ltd., Woori Private Equity Asset Management Co., Ltd..

As a result, Woori Financial Group prepared these consolidated financial statements including the operations of its predecessor entities Woori Bank, Woori FIS Co., Ltd., Woori Finance Research Institute Co., Ltd., Woori Credit Information Co., Ltd., Woori Fund Service Co., Ltd., Woori Private Equity Asset Management Co., Ltd. and its consolidated subsidiaries.

Woori Financial Group, which is a controlling entity in accordance with International Financial Reporting standards (IFRS) 10 *Consolidated Financial Statements*, was established in 1899 and is engaged in the commercial banking business under the Banking Act, trust business and foreign exchange business under the Financial Investment Services and Capital Market Act (hereinafter referred to as the Capital Market Act).

Previously, Woori Finance Holdings Co., Ltd. (established on March 27, 2001 in accordance with Financial Holding Companies Act), the former holding company of Woori Financial Group, held a 100% ownership of the Bank. Effective from November 1, 2014, Woori Finance Holdings Co., Ltd. completed its merger (the Merger) with and into the Bank. Accordingly, the shares of the Bank, 597 million shares, prior to the merger, was reduced to nil in accordance with capital reduction procedure, and then, in accordance with the merger ratio, the Bank newly issued 676 million shares. As a result, the paid-in capital of the Bank as of December 31, 2018 is capital stock amounting to 3,381,392 million Korean Won. Meanwhile, during the year ended December 31, 2016, the Korea Deposit Insurance Corporation (KDIC), the majority shareholder of the Bank, sold its 187 million shares in the Bank in accordance with the contract of Disposal of Woori Bank s shares to Oligopolistic Shareholders . In addition to the sale, during the year ended December 31, 2017, KDIC sold additional 33 million shares. As a result, KDIC holds 125 million shares (18.43% ownership interest) of the Bank as of December 31, 2018 and 2017, and is the majority shareholder of the Bank.

On June 24, 2002, Woori Finance Holdings Co., Ltd. listed its common stock on the Korea Exchange through public offering. In addition, on September 29, 2003, Woori Finance Holdings Co., Ltd. registered with the Securities and Exchange Commission in the United States of America and, on the same day, listed its American Depositary Shares on the New York Stock Exchange.

As Woori Finance Holdings Co., Ltd. was merged into the Bank, the Bank, which is the existing company, succeeded such rights and obligations as a listed company on the Korea Exchange and the New York Stock Exchange.

As a result of such merger, the Bank incorporated Woori Card Co., Ltd., Woori Investment Bank Co., Ltd., Woori FIS Co., Ltd., Woori Private Equity Asset Management Co., Ltd. and Woori Finance Research Institute Co., Ltd. as its subsidiaries.

The headquarters of the Bank is located at 51, Sogong-ro, Jung-gu, Seoul, Korea. The Bank has 877 branches and offices in Korea, and 23 branches and offices overseas as of December 31, 2018.

(2) The consolidated financial statements for Woori Financial Group Inc. and its subsidiaries (the Group) include the following subsidiaries:

Subsidiaries	Main business	Percentage of ownership (%) December 31, 2017	Percentage of ownership (%) December 31, 2018	Location	Financial statements as of (2018)
Woori Bank:					
Woori FIS Co., Ltd.	System software development & maintenance	100.0	100.0	Korea	December 31
Woori Private Equity Asset Management Co., Ltd.	Finance	100.0	100.0	Korea	December 31
Woori Finance Research Institute Co., Ltd.	Other service business	100.0	100.0	Korea	December 31
Woori Card Co., Ltd.	Finance	100.0	100.0	Korea	December 31
Woori Investment Bank Co., Ltd.	Other credit finance business	59.8	59.8	Korea	December 31
Woori Credit Information Co., Ltd.	Credit information	100.0	100.0	Korea	December 31
Woori America Bank	Finance	100.0	100.0	U.S.A.	December 31
Woori Global Markets Asia Limited		100.0	100.0	Hong Kong	December 31
Woori Bank China Limited		100.0	100.0	China	December 31
AO Woori Bank		100.0	100.0	Russia	December 31
PT Bank Woori Saudara Indonesia 1906 Tbk		79.9	79.9	Indonesia	December 31
Banco Woori Bank do Brasil S.A.		100.0	100.0	Brazil	December 31
		99.9	99.9	Korea	December 31

Korea BTL Infrastructure Fund					
Woori Fund Service Co., Ltd.		100.0	100.0	Korea	December 31
Woori Finance Cambodia PLC.		100.0	100.0	Cambodia	December 31
Woori Finance Myanmar Co., Ltd.		100.0	100.0	Myanmar	December 31
Wealth Development Bank		51.0	51.0	Philippines	December 31
Woori Bank Vietnam Limited		100.0	100.0	Vietnam	December 31
WB Finance Co., Ltd.(*5)			100.0	Cambodia	December 31
Woori Bank Europe(*5)			100.0	Germany	December 31
Kumho Trust First Co., Ltd.(*1)	Asset securitization	0.0	0.0	Korea	December 31
Asiana Saigon Inc.(*1)		0.0	0.0	Korea	December 31
Consus Eighth Co., LLC(*4)		0.0		Korea	
KAMCO Value Recreation First Securitization Specialty Co., Ltd. (*1)		15.0	15.0	Korea	December 31
Hermes STX Co., Ltd.(*1)		0.0	0.0	Korea	December 31
BWL First Co., LLC (*1)		0.0	0.0	Korea	December 31
Deogi Dream Fourth Co., Ltd.(*1)		0.0	0.0	Korea	December 31
Jeonju Iwon Ltd.(*1)		0.0	0.0	Korea	December 31
Wonju I one Inc.(*1)		0.0	0.0	Korea	December 31
Heitz Third Co., Ltd.(*1)		0.0	0.0	Korea	December 31
Woorihansoop 1st Co., Ltd.(*1)		0.0	0.0	Korea	December 31
Electric Cable First Co., Ltd.(*1)		0.0	0.0	Korea	December 31
Woori International First Co., Ltd.(*1)		0.0	0.0	Korea	December 31

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ubsidiaries	Main business	Percentage of ownership (%) December 31, 2017	December 31, 2018	Location	Financial statements as of (2018)
oori HJ First Co., Ltd.(*4)		0.0		Korea	
oori WEBST 1st Co., Ltd.(*1)		0.0	0.0	Korea	December 3
ibihansoop 1st Co., Ltd.(*1)		0.0	0.0	Korea	December 3
NLD 1st Inc.(*4)		0.0		Korea	
i QS 1st Co., Ltd.(*1)		0.0	0.0	Korea	December 3
i Display 1st Co., Ltd.(*1)		0.0	0.0	Korea	December 3
ger Eyes 2nd Co., Ltd.(*1)		0.0	0.0	Korea	December 3
oori Serveone 1st Co., Ltd.(*1)		0.0	0.0	Korea	December 3
i Display 2nd Co., Ltd.(*1)			0.0	Korea	December 3
oori the Colony Unjung Securitization Specialty Co., Ltd.(*1)			0.0	Korea	December 3
oori Dream 1st Co., Ltd.(*1)			0.0	Korea	December 3
oori Dream 2nd Co., Ltd.(*1)			0.0	Korea	December 3
oori H 1st Co., Ltd.(*1)			0.0	Korea	December 3
oori HS 1st Co., Ltd.(*1)			0.0	Korea	December 3
oori HS 2nd Co., Ltd.(*1)			0.0	Korea	December 3
oori Sinnonhyeon 1st Inc.(*1)			0.0	Korea	December 3
oori K 1st Co., Ltd.(*1)			0.0	Korea	December 3
i S 1st Co., Ltd.(*1)			0.0	Korea	December 3
nart Casting Inc.(*1)			0.0	Korea	December 3
5 Pro Short-term Bond Investment Fund 13(*2)	Securities investment and others	100.0	100.0	Korea	December 3
eungkuk Global Private Placement Investment Trust No. 1(*2)			98.5	Korea	December 3
eungkukWoori Tech Company Private Placement Investment ust No. 1(*2)		98.0	98.0	Korea	December 3
Partners Water Supply Private Placement Investment Trust o.2(*2)			97.3	England	December 3
onsus Sakhalin Real Estate Investment Trust 1st(*2)		75.0	75.0	Korea	December 3
inciple Guaranteed Trust(*3)	Trust	0.0	0.0	Korea	December 3
inciple and Interest Guaranteed Trust(*3)		0.0	0.0	Korea	December 3
oori Investment Bank:					
ongwoo First Securitization Specialty Co., Ltd.(*1)	Asset securitization	5.0	5.0	Korea	December 3
ari First Securitization Specialty Co., Ltd.(*1)		5.0	5.0	Korea	December 3
ari Second Securitization Specialty Co., Ltd.(*1)			5.0	Korea	December 3
amjong 1st Securitization Specialty Co., Ltd.(*1)		5.0	5.0	Korea	December 3
ukgeum First Securitization Specialty Co., Ltd.(*1)		5.0	5.0	Korea	December 3
ukgeum Second Securitization Specialty Co., Ltd.(*1)			5.0	Korea	December 3
oori Card Co., Ltd.:					
UTU Finance-WCI Myanmar Co., Ltd.	Finance	100.0	100.0	Myanmar	December 3
oori Card one of 2017-1 Securitization Specialty Co., Ltd.(*1)	Asset securitization	0.5	0.5	Korea	December 3
oori Card one of 2017-2 Securitization Specialty Co., Ltd.(*1)		0.5	0.5	Korea	December 3
oori Card one of 2018-1 Securitization Specialty Co., Ltd.(*1)			0.5	Korea	December 3

(*1)

The entity is a structured entity for the purpose of asset securitization and is in scope for consolidation. Although the Group is not a majority shareholder, the Group 1) has the power over the investee, 2) is exposed to or has rights to variable returns from its involvement with the investee, and 3) has the ability to use its power to affect its returns.

(*2) The entity is a structured entity for the purpose of investment in securities and is in scope for consolidation. Although the Group is not a majority shareholder, the Group 1) has the power over the investee, 2) is exposed to or has rights to variable returns from its involvement with the investee, and 3) has the ability to use its power to affect its returns.

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(*3) The entity is a money trust under the Financial Investment Services and Capital Markets Act and is in scope for consolidation. Although the Group is not a majority shareholder, the Group 1) has the power over the investee, 2) is exposed to or has rights to variable returns from its involvement with the investee, and 3) has the ability to use its power to affect its returns.

(*4) The entity was removed from the list of subsidiaries as the control over the entity was lost during the current period.

(*5) The entity was included in the list of subsidiaries as the Bank acquired more than 50% of the ownership interest.

(3) The Group has not consolidated the following entities as of December 31, 2017 and 2018 despite having more than 50% ownership interest:

	As of December 31, 2017		
Subsidiaries	**Location**	**Main Business**	**Percentage of ownership (%)**
Golden Bridge NHN Online Private Equity Investment(*)	Korea	Securities Investment	60.0
Mirae Asset Maps Clean Water Private Equity Investment Trust 7th(*)	Korea	Securities Investment	59.7
Kiwoom Yonsei Private Equity Investment Trust(*)	Korea	Securities Investment	88.9
Hana Walmart Real Estate Investment Trust 41-1(*)	Korea	Securities Investment	90.1
IGIS Global Private Placement Real Estate Fund No. 148-1(*)	Korea	Securities Investment	75.0
IGIS Global Private Placement Real Estate Fund No. 148-2(*)	Korea	Securities Investment	75.0

	As of December 31, 2018		
Subsidiaries	**Location**	**Main Business**	**Percentage of ownership (%)**
Golden Bridge NHN Online Private Equity Investment(*)	Korea	Securities Investment	60.0
Mirae Asset Seobu Underground Expressway Professional Investment(*)	Korea	Securities Investment	65.8
Mirae Asset Maps Clean Water Private Equity Investment Trust 7th(*)	Korea	Securities Investment	59.7
Kiwoom Yonsei Private Equity Investment Trust(*)	Korea	Securities Investment	88.9
Hana Walmart Real Estate Investment Trust 41-1(*)	Korea	Securities Investment	89.6
IGIS Europe Private Placement Real Estate Fund No. 163-2(*)	Korea	Securities Investment	97.9
IGIS Global Private Placement Real Estate Fund No. 148-1(*)	Korea	Securities Investment	75.0
IGIS Global Private Placement Real Estate Fund No. 148-2(*)	Korea	Securities Investment	75.0
KB Nongso Sewage Treatment Equipment Private Special Asset(*)	Korea	Securities Investment	50.0
Mirae Asset Seoul Ring Expressway Private Special Asset Fund No. 1(*)	Korea	Securities Investment	66.2
Hangkang Sewage Treatment Plant Fund(*)	Korea	Securities Investment	55.6

Consus KyungJu Green Private Placement Real Estate Fund No. 1(*)	Korea	Securities Investment	52.4

(*) Since the investee is a private equity investment fund, the Group does not have the power over the fund s activities even though it holds more than 50% of ownership interest.

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(4) The summarized financial information of the major subsidiaries are as follows. The financial information of each subsidiary was prepared on the basis of consolidated financial statements. (Unit: Korean Won in millions):

	As of and for the year ended December 31, 2017				
	Assets	Liabilities	Operating revenue	Net income (loss) attributable to owners	Comprehensive income (loss) attributable to owners
Woori FIS Co., Ltd.	103,932	71,386	252,460	1,940	(2,963)
Woori Private Equity Asset Management Co., Ltd.	42,894	2,670	7,257	(4,114)	(4,074)
Woori Finance Research Institute Co., Ltd.	3,790	350	4,733	83	64
Woori Card Co., Ltd.	8,605,993	6,973,705	1,771,157	101,214	107,321
Woori Investment Bank Co., Ltd.	1,880,157	1,588,610	183,376	20,023	20,210
Woori Credit Information Co., Ltd.	33,298	6,175	31,580	861	752
Woori America Bank	1,954,301	1,679,248	81,337	11,869	(16,833)
Woori Global Markets Asia Limited	290,226	178,343	11,345	1,922	(12,544)
Woori Bank China Limited	4,960,637	4,458,683	388,913	13,809	(15,252)
AO Woori Bank	201,704	149,101	15,656	4,748	1,217
PT Bank Woori Saudara Indonesia 1906 Tbk	2,230,617	1,745,171	192,485	38,488	(18,689)
Banco Woori Bank do Brasil S.A.	213,889	181,544	20,455	1,843	(2,840)
Korea BTL Infrastructure Fund	786,480	301	30,240	26,390	26,390
Woori Fund Service Co., Ltd.	12,653	1,242	9,021	1,398	1,398
Woori Finance Cambodia PLC.	51,304	32,873	5,895	983	(473)
Woori Finance Myanmar Co., Ltd.	18,236	5,307	2,506	791	15
Wealth Development Bank	191,049	156,808	13,632	1,323	(1,093)
Woori Bank Vietnam Limited	775,758	632,160	29,698	2,436	(15,347)
Money trust under the FISCM Act	1,560,672	1,530,760	44,344	582	582
Structured entity for the securitization of financial assets	867,583	1,275,719	22,730	1,179	(2,800)
Structured entity for the investments in securities	34,939	76	377	(475)	(38,592)

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	As of and for the year ended December 31, 2018				
	Assets	Liabilities	Operating revenue	Net income (loss) attributable to owners	Comprehensive income (loss) attributable to owners
Woori FIS Co., Ltd.	96,260	63,412	271,651	2,840	269
Woori Private Equity Asset Management Co., Ltd.	38,820	1,439	1,713	(2,794)	(2,843)
Woori Finance Research Institute Co., Ltd.	3,891	560	4,708	7	(109)
Woori Card Co., Ltd.	9,987,057	8,305,093	1,371,301	114,767	106,517
Woori Investment Bank Co., Ltd.	2,682,660	2,367,418	205,446	25,552	25,533
Woori Credit Information Co., Ltd.	34,921	6,386	36,883	1,657	1,411
Woori America Bank	2,182,454	1,878,117	90,975	20,510	32,335
Woori Global Markets Asia Limited	517,627	396,216	18,748	5,144	9,647
Woori Bank China Limited	5,470,927	4,953,813	366,973	21,879	19,194
AO Woori Bank	305,521	256,260	19,433	5,163	(3,234)
PT Bank Woori Saudara Indonesia 1906 Tbk	2,355,975	1,853,768	192,719	40,385	27,109
Banco Woori Bank do Brasil S.A.	179,130	149,146	13,971	1,262	(2,326)
Korea BTL Infrastructure Fund	777,437	299	29,760	26,057	26,057
Woori Fund Service Co., Ltd.	14,448	1,440	10,052	1,597	1,597
Woori Finance Cambodia PLC.	93,239	71,133	11,038	2,826	3,676
Woori Finance Myanmar Co., Ltd.	19,340	6,886	4,496	640	(1,256)
Wealth Development Bank	218,134	184,344	13,668	80	(451)
Woori Bank Vietnam Limited	954,580	720,554	48,716	10,710	13,618
WB Finance Co., Ltd.	268,794	225,655	24,310	2,421	2,329
Woori Bank Europe	58,399	311	5	(5,959)	(5,974)
Money trust under the FISCM Act	1,582,765	1,552,594	54,860	259	259
Structured entity for the securitization of financial assets	1,369,745	1,786,869	53,578	4,990	(5,681)
Structured entity for the investments in securities	63,676	142	1,826	(1,299)	(3,009)

(5) The financial support that the Group provides to consolidated structured entities is as follows:

Structured entity for asset securitization

The structured entity is established for the purpose of securitization of project financing loans, corporate bonds, and other financial assets. The Group is involved with the structured entity through providing with credit facility over asset-backed commercial papers issued by the entity, originating loans directly to the structured entity, or purchasing 100% of the subordinated debts issued by the structured entity.

Structured entity for the investments in securities

The structured entity is established for the purpose of investments in securities. The Group acquires beneficiary certificates through its contribution of fund to the structured entity, and it is exposed to the risk that it may not be able to recover its fund depending on the result of investment performance of asset managers of the structured entity.

Money trust under the Financial Investment Services and Capital Markets Act

The Group provides with financial guarantee of principal and interest or solely principal to some of its trust products. Due to the financial guarantees, the Group may be obliged when the principal and interest or principal of the trust product sold is short of the guaranteed amount depending on the result of investment performance of the trust product.

(6) The Group has entered into various agreements with structured entities such as asset securitization, structured finance, investment fund, and monetary trust. The characteristics and the nature of risks related to unconsolidated structured entities over which the Group does not have control in accordance with IFRS 10 are as follows:

The ownership interests on unconsolidated structured entities that the Group hold are classified into asset securitization vehicles, structured finance and investment fund, based on the nature and the purpose of the structured entities.

Unconsolidated structured entities classified as asset securitization vehicles are entities that issue asset-backed securities, pay the principal and interest or distributes dividends on asset-backed securities through borrowings or profits from the management, operation and sale of securitized assets. The Group transfers related risks from the purchase commitments of asset-backed securities or issuance of asset-backed securities through credit grants, and the structured entities recognize related interest or fee revenue. There are entities that provide additional fund and conditional debt acquisition commitment before the Group s financial support, but the Group is still exposed to losses arising from the purchase of financial assets issued by the structured entities when it fails to renew the securities.

Unconsolidated structured entities classified as structured financing include real estate project financing investment vehicle, social overhead capital companies, and special purpose vehicles for ship (aircraft) financing. Each entity is incorporated as a separate company with a limited purpose in order to efficiently pursue business goals. Structured financing is a financing method for large-scale risky business, with investments made based on feasibility of the specific business or project, instead of credit of business owner or physical collaterals. The investors receive profits from the operation of the business. The Group recognizes interest revenue, valuation gain or loss on ownership interest, or dividend income. With regard to uncertainties involving structured financing, there are entities that provide financial support such as additional fund, guarantees and prioritized credit grants prior to the Group s intervention, but the Group is exposed to possible losses due to loss of principal from reduction in investment value or irrecoverable loans arising from failure to collect scheduled cash flows and cessation of projects.

Unconsolidated structured entities classified as investment funds include investment trusts and private equity funds. An investment trust orders the investment and operation of funds to the trust manager in accordance with trust contract with profits distributed to the investors. Private equity funds finances money required to acquire equity securities to enable direction of management and/or improvement of ownership structure, with profit distributed to the investors. The Group recognizes pro rata amount of valuation gain or loss on investment and dividend income as an investor, and may be exposed to losses due to reduction in investment value.

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Total assets of the unconsolidated structured entities, the carrying value of the related items recorded, the maximum exposure to risks, and the loss recognized in conjunction with the unconsolidated structured entities as of December 31, 2017 and 2018 are as follows (Unit: Korean Won in millions):

	December 31, 2017		
	Asset securitization vehicle	Structured finance	Investment Funds
Total asset of the unconsolidated structured entities	7,295,601	40,172,830	13,641,135
Assets recognized in the consolidated financial statements related to the unconsolidated structured entities	3,215,159	2,314,043	1,138,523
Financial assets held for trading		233,428	10,160
AFS financial assets	902,390	106,819	904,774
HTM financial assets	2,269,451		
Loans and receivables	43,180	1,969,760	
Investments in joint ventures and associates			223,589
Derivative assets	138	4,036	
Liabilities recognized in the consolidated financial statements related to the unconsolidated structured entities	1,433	1,506	
Derivative liabilities	575	968	
Other liabilities (including provisions)	858	538	
The maximum exposure to risks	4,032,531	2,918,448	1,138,523
Investments	3,215,159	2,314,043	1,138,523
Credit facilities	817,372	604,405	
Loss recognized on unconsolidated structured entities	837	3,939	5,993

	December 31, 2018		
	Asset securitization vehicle	Structured finance	Investment Funds
Total asset of the unconsolidated structured entities	6,796,235	58,161,494	11,138,822
Assets recognized in the consolidated financial statements related to the unconsolidated structured entities	2,571,835	2,831,842	1,530,767
Financial assets at FVTPL	285,156	70,219	1,197,844
Financial assets at FVTOCI	281,919	48,961	
Financial assets at amortized cost	2,003,921	2,511,055	71,150
Investments in joint ventures and associates		197,393	261,773
Derivative assets	839	4,214	
Liabilities recognized in the consolidated financial statements related to the unconsolidated structured entities	1,260	905	
Derivative liabilities	116	248	
Other liabilities (including provisions)	1,144	657	
The maximum exposure to risks	3,252,329	3,408,271	1,587,325
Investments	2,571,835	2,831,842	1,530,767
Credit facilities	680,494	576,429	56,558

Loss recognized on unconsolidated structured entities	5,764	11,609	13,868

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(7) The share of non-controlling interests on the net income and equity of subsidiaries of which non-controlling interests are significant are significant to the Group s consolidated financial statements are as follows: (Unit: Korean Won in millions):

1) Accumulated non-controlling interests at the end of the reporting period

	December 31, 2017	December 31, 2018
Woori Investment Bank	119,111	130,088
PT Bank Woori Saudara Indonesia 1906 Tbk	64,877	68,250
Wealth Development Bank	16,778	16,557

2) Net income or loss attributable to non-controlling interests

	For the year ended December 31,		
	2016	2017	2018
Woori Investment Bank	9,990	8,370	10,262
PT Bank Woori Saudara Indonesia 1906 Tbk	6,383	8,882	8,126
Wealth Development Bank	611	648	39

3) Dividends to non-controlling interests

	For the year ended December 31,		
	2016	2017	2018
PT Bank Woori Saudara Indonesia 1906 Tbk	1,242	1,513	2,082

2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES

(1) Basis of presentation

The Woori Financial Group Inc. and its subsidiaries (the Group) s consolidated financial statements are prepared in accordance with Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

The Group operates primarily in Korea and its official accounting records are maintained in Korean Won. The United States dollar (U.S. dollar or US$ or USD) amounts are provided herein as supplementary information solely for the convenience of readers outside Korea. Korean Won amounts are expressed in U.S. Dollars at the rate of 1,112.9 Korean Won to US$1.00, the noon buying exchange rate in effect on December 31, 2018, as quoted by the Federal Reserve Bank of New York in the United States. Such convenience translation into U.S. Dollars should not be construed as representations that Korean Won amounts have been, could have been, or could in the future be, converted at this or any other rate of exchange.

The significant accounting policies applied in the preparation of consolidated financial statements as of and for the year ended December 31, 2018 are stated below, and the accounting policies applied are identical to ones used in the preparation of previous period s consolidated financial statements, except for the effects of adopting new standards or interpretations as explained below.

The consolidated financial statements are prepared at the end of each reporting period in historical cost basis, except for certain non-current assets and financial assets that are either revalued or measured in fair value. Historical cost is generally measured at the fair value of consideration given to acquire assets.

The consolidated financial statements for the Group was authorized for issue by the management on April 26, 2019.

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1) The standards and interpretations that are newly adopted by the Group during the current period, and the changes in accounting policies thereof are as follows:

Adoption of IFRS 9 *Financial instruments* (enacted)

The Group initially applied IFRS 9 and related amendments made to other standards during the current period, with January 1, 2018 as the date of initial application. IFRS 9 introduces new rules on: 1) classification and measurement of financial assets and financial liabilities, 2) impairment of financial assets, and 3) hedge accounting. Additionally, the Group adopted consequential amendments to IFRS 7 Financial Instruments: Disclosures that were applied to the disclosures for 2018.

The Group decided not to restate the prior period figures when applying the Standard for the first time, and as such the comparative consolidated financial statements are not restated.

The main contents of the new accounting standard and the effect on the consolidated financial statements of the Group are as follows.

a) Classification and measurement of financial assets

All financial assets included in the scope of IFRS 9 are subsequently measured at amortized cost or fair value based on the Group s business model for the management of financial assets and the nature of the contractual cash flows of the financial assets.

Debt instruments that are held within a business model whose objective is to collect the contractual cash flows, and that have contractual cash flows that are solely payments of principal and interest on the principal outstanding are generally measured at amortized cost at the end of subsequent accounting periods (Financial assets at amortized cost).

Debt instruments that are held within a business model whose objective is achieved both by collecting contractual cash flows and selling financial assets, and that have contractual cash flows that are solely payments of principal and interest on the principal outstanding are generally measured at fair value through other comprehensive income (Financial assets at fair value through other comprehensive income (FVTOCI)).

All other debt instruments and equity instruments are measured at their fair value at the end of subsequent accounting periods, and any change in the fair value is recognized as profit or loss (Financial assets at fair value through profit or loss (FVTPL)).

Notwithstanding the foregoing, the Group may make the following irrevocable choice or designation at the time of initial recognition of a financial asset.

The Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value of an investment in an equity instrument within the scope of this standard that is neither held for trading nor is a contingent consideration recognized by an acquirer in a business combination to which IFRS 3(R) applies.

At initial recognition, financial assets at amortized cost or FVTOCI may be irrevocably designated as financial assets at fair value through profit or loss mandatorily measured at fair value if doing so eliminate or significantly reduce a measurement or recognition inconsistency.

As of the date of initial application of IFRS 9, there are no debt instruments classified either as financial assets at amortized cost or FVTOCI that are designated as financial assets at fair value through profit or loss.

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When debt instruments measured at FVTOCI are derecognized, the cumulative gain or loss recognized in other comprehensive income is reclassified from equity to profit or loss as a reclassification adjustment. On the other hand, for equity instruments designated as financial assets at fair value through other comprehensive income, cumulative gains or losses previously recognized in other comprehensive income are not subsequently reclassified to retained earnings. Debt instruments measured subsequently at amortized cost or at FVTOCI are subject to impairment.

The classification and measurement of financial assets and liabilities in accordance with IFRS 9 and IAS 39 as of January 1, 2018 are as follows (Unit: Korean Won in millions):

	Classification in accordance with IAS 39	**Classification in accordance with IFRS 9**	**Amount in accordance with IAS 39**	**Reclassification**	**Remeasurement(*2)**	**Amount in accordance with IFRS 9**
Deposit	Loans and receivables	Loan and other financial assets at amortized cost	8,870,835			8,870,835
Deposit	Financial assets at FVTPL	Financial assets at FVTPL	25,972			25,972
Debt securities	Financial assets at FVTPL	Financial assets at FVTPL(*1)	2,654,027			2,654,027
Equity securities	Financial assets at FVTPL	Financial assets at FVTPL(*1)	47,304			47,304
Derivative assets	Financial assets at FVTPL	Financial assets at FVTPL(*1)	3,115,775	(2,137)		3,113,638
Equity securities	AFS financial assets	Financial assets at FVTPL(*1)	1,273,498	1,219		1,274,717
Equity securities	AFS financial assets	Financial assets at FVTOCI	850,207			850,207
Debt securities	AFS financial assets	Financial assets at FVTPL	46,855			46,855
Debt securities	AFS financial assets	Financial assets at FVTOCI	12,874,209			12,874,209
Debt securities	AFS financial assets	Securities at amortized cost	308,181		14,119	322,300
Debt securities	HTM financial assets	Securities at amortized cost	16,749,296			16,749,296
Loans	Loans and receivables	Financial assets at FVTPL(*1)	279,032	918	50	280,000
Loans	Loans and receivables	Loan and other financial assets at amortized cost	253,014,491			253,014,491
Derivative assets (Designated for hedging)	Derivative assets (Designated for hedging)	Derivative assets (Designated for hedging)	59,272			59,272
Other financial assets	Loans and receivables	Loan and other financial assets at	6,772,088			6,772,088

amortized cost			
Total financial assets	306,941,042	14,169	306,955,211

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	Classification in accordance with IAS 39	Classification in accordance with IFRS 9	Amount in accordance with IAS 39	Reclassification	Remeasurement(*2)	Amount in accordance with IFRS 9
Deposit due to customers	Financial liabilities at FVTPL	Financial liabilities at FVTPL	25,964			25,964
Deposit due to customers	Financial liabilities at amortized cost	Financial liabilities at amortized cost	234,695,084			234,695,084
Borrowings	Financial liabilities at amortized cost	Financial liabilities at amortized cost	14,784,706			14,784,706
Debentures	Financial liabilities at FVTPL	Financial liabilities at FVTPL	91,739			91,739
Debentures	Financial liabilities at amortized cost	Financial liabilities at amortized cost	27,869,651			27,869,651
Equity-linked securities	Financial liabilities at FVTPL	Financial liabilities at FVTPL	160,057			160,057
Derivatives liabilities	Financial liabilities at FVTPL	Financial liabilities at FVTPL	3,150,149			3,150,149
Derivatives liabilities (Designated for hedging)	Derivatives liabilities (Designated for hedging)	Derivatives liabilities (Designated for hedging)	67,754			67,754
Other financial liabilities	Financial liabilities at amortized cost	Financial liabilities at amortized cost	13,892,461			13,892,461
Provision for financial guarantee	Provision	Financial liabilities at amortized cost	71,697			71,697
Total financial liabilities			294,809,262			294,809,262

(*1) Under IAS 39, the embedded derivatives out of hybrid financial instruments were accounted for as derivative assets or liabilities if the criteria for separation of the embedded derivatives were met; and the host contracts in those instruments were recorded as available-for-sale financial assets or loans and receivables respectively. However, since IFRS 9 requires financial instruments to be accounted for based on the terms of the entire financial instrument, hybrid financial assets are revalued and classified as financial assets at fair value through profit or loss.

(*2) The remeasurement effect due to expected credit losses is not included (The remeasurement effect of expected credit losses is as follows: b) Impairment of financial assets).

At the date of the initial application of IFRS 9, there were no financial assets or liabilities measured at FVTPL that were reclassified to FVTOCI or amortized cost category.

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The financial assets at FVTPL or FVTOCI that are reclassified to the amortized cost measurement category as of the date of initial application of IFRS 9, and the related valuation gain or loss and fair value of the financial assets as of December 31, 2018 had it not been reclassified, are as follows (Unit: Korean Won in millions):

Account subject	Category before the adoption of IFRS 9	Amount of valuation gain/loss had it not been reclassified	Fair value
Debt securities(*)	AFS financial assets	2	257,665

(*) Those financial assets that are removed from the books as of December 31, 2018 are not presented in the table above.

b) Impairment of financial assets

The impairment model under IFRS 9 reflects expected credit losses, as opposed to incurred credit losses under IAS 39. Under the impairment approach in IFRS 9, it is no longer necessary for a credit event to have occurred before credit losses are recognized. Instead, the Group accounts for expected credit losses and changes in those expected credit losses. The amount of expected credit losses should be updated at each reporting date to reflect changes in credit risk since initial recognition.

The Group is required to recognize the expected credit losses for financial instruments measured at amortized cost or FVTOCI (debt instrument), and unused loan commitments and financial guarantee contracts that are subject to the impairment provisions of IFRS 9. In particular, IFRS 9 requires the Group to measure the loss allowance for a financial instrument at an amount equal to the lifetime expected credit losses (ECL) if the credit risk on that financial instrument has increased significantly since initial recognition, or if the financial instrument is a purchased or originated credit-impaired financial asset. If the credit risk of a financial instruments does not increase significantly after initial recognition (excluding purchased or originated credit-impaired loans for financial assets already impaired at initial recognition), the Group measures the loss allowance on the financial instruments at the amount equivalent to the expected 12-month credit loss.

Management assessed the impairment of the Group s financial assets, lending arrangements and financial guarantees at the date of initial application by using reasonable and supportive measures that can be used without undue cost or effort in determining the credit risk of the financial instruments at initial recognition in accordance with IFRS 9 and in comparing above credit risk with the credit risk at the date of initial application. As of January 1, 2018, the results of the assessment are as follows (Unit: Korean Won in millions):

	Classification in accordance with IAS 39	Classification in accordance with IFRS 9	Loss allowance in accordance with IAS 39 (A)	Loss allowance in accordance with IFRS 9 (B)	Increases (B-A)
Deposit	Loans and receivables	Loans and other financial assets at amortized cost	2,458	3,092	634
Debt securities AFS securities	AFS financial assets	Financial assets at FVTOCI		4,236	4,236

HTM securities	HTM financial assets	Securities at amortized cost		5,078	5,078
Loans and other financial assets	Loans and receivables	Loans and other financial assets at amortized cost	1,827,785	2,076,873	249,088
Payment guarantee			183,247	192,924	9,677
Loan commitment			66,115	104,985	38,870
Total			2,079,605	2,387,188	307,583

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c) Classification and measurement of financial liabilities

One of the major changes related to the classification and measurement of financial liabilities as a result of the adoption of IFRS 9 is the accounting for change in the fair value of financial liabilities designated as at fair value through profit or loss due to the changes in issuer s own credit risk. The Group recognizes the effect of changes in the credit risk of financial liabilities designated as at FVTOCI in other comprehensive income, except for cases where it creates or enlarges accounting mismatch of the profit or loss. Changes in fair value due to credit risk of financial liabilities are not subsequently reclassified to profit or loss, but are reclassified as retained earnings when financial liabilities are derecognized.

In accordance with IAS 39, the entire of changes in fair value of financial liabilities designated as at FVTPL are recognized in profit or loss. As of January 1, 2018, the Group designated 251,796 million Korean Won of FVTPL out of 294,813,795 million of financial liabilities to be measured at FVTPL, and recognized 133 million Korean Won as accumulated other comprehensive loss in relation to the changes in own credit risk of financial liabilities.

d) Hedge accounting

The new hedge accounting model maintains three types of hedge accounting. However, it introduced more flexibility in the types of transactions that are eligible for hedge accounting and expanded the types of hedging instruments and non-financial hedge items that qualify for hedge accounting. The standard related to the evaluation of hedge accounting has been amended as a whole, where it is now replaced by the principle of economic relationship between the hedged item and the hedging instrument. Retrospective assessment of the hedging effectiveness is no longer required. Additional disclosure requirements have been introduced in relation to the Group s risk management activities.

In accordance with the transitional provisions of IFRS 9 on hedge accounting, the Group adopted the hedge accounting provisions of IFRS 9 prospectively from January 1, 2018. As of the date of initial application, the Group concluded that the hedging relationship in accordance with IAS 39 is appropriate for hedge accounting under IFRS 9, thus the hedging relationship is considered to exist continually. Since the major conditions for hedging instruments and the hedged items are consistent, all hedging relationships are consistent within the effectiveness assessment requirements of IFRS 9. The Group has not designated a hedging relationship in accordance with IFRS 9 in which the hedge relationship would not have met the requirements for hedge accounting under IAS 39.

e) Effect on equity as a result of adoption of IFRS 9 The effect on equity due to the adoption of IFRS 9 as of January 1, 2018 is as follows (Unit: Korean Won in millions):

Impact on accumulated other comprehensive loss due to financial assets at FVTOCI, etc.

	Amount
Balance as of December 31, 2017 (prior to IFRS 9)	(89,723)
Adjustments	(392,177)
Reclassification of available-for-sale financial assets to financial assets at FVTPL	(152,124)
Recognition of expected credit losses of debt securities at FVTOCI	4,293
Reclassification of available for sale financial assets(equity securities) to financial assets at FVTOCI	(397,508)
	(133)

Effect on changes in credit risk of financial liabilities at fair value through profit or loss designated as upon initial recognition	
Others	3,499
Income tax effect	149,796
Balance as of January 1, 2018 (based on IFRS 9)	(481,900)

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Retained earnings impact

	Amount
Balance as of December 31, 2017 (prior to IFRS 9)	15,620,006
Adjustments	177,091
Reclassification of available-for-sale financial assets to financial assets at FVTPL	152,124
Recognition of expected credit losses of debt instruments at FVTOCI	(4,293)
Reclassification of available-for-sale financial assets(equity securities) to financial assets at FVTOCI	397,508
Effect on revaluation of financial assets at amortized cost from loan and receivables or AFS financial assets	282
Recognition of expected credit losses of financial assets at amortized cost which were previously loan and receivables	(240,683)
Effect on provision for guarantees and unused loan commitments on liabilities	(48,548)
Effect on changes in credit risk of financial liabilities at fair value through profit or loss designated as upon initial recognition	133
Others	(4,950)
Income tax effect	(74,482)
Balance as of January 1, 2018 (based on IFRS 9)	15,797,097

Adoption of IFRS 15 Revenue from contracts with customers (enacted)

The Group adopted the requirements using the modified retrospective method, with the effect of initial application recognized on the date of initial application and without restatement of the comparative periods. Also, this standard is retroactively applied to contracts which are not completed as of the date of initial application, but practical expedient is used so that contract modifications made before the date of initial application are not retroactively restated.

Accordingly, the Group has not retroactively restated the comparative consolidated financial statements presented herein.

The effects of the adoption of IFRS 15 by Woori Card Co. Ltd., a subsidiary of Woori Bank, are as follows. Woori Card Co. Ltd. has modified its accounting policies related to the customer loyalty program, whereby rewards and points provided to the users of the card are deducted from revenue due to the fact that these are regarded as consideration provided to the customer. As a result of the aforementioned accounting policy modification, Fees and Commission Received on Credit Card and Fees and Commission Paid for Credit Card are both reduced by 525,978 million Won. On the other hand, accounting change modifications resulting from the adoption of IFRS 15 did not have any significant effect on the Consolidated Statement of Financial Position, the capital and the Consolidated Statement of Cash Flows.

Amendments to IFRS 2 Classification and Measurement of Share-based Payment Transactions

The amendments clarify that: 1) When measuring the fair value of share-based payment, the effects of vesting and non-vesting conditions on the measurement of cash-settled share-based payment should be consistent with the measurement of equity-settled share-based payment; 2) When an entity has an obligation to pay the employee s withholding tax to the tax authority for the employee s equity-settled share-based payment, the transaction shall be classified in its entirety as an equity-settled share-based payment transaction if it would have been so classified in the absence of the net settlement feature; and 3) When a cash-settled share-based payment changes to an equity-settled share-based payment because of modifications of the terms and conditions, the original liability recognized is derecognized and the equity-settled share-based payment is recognized at the modification date fair value. Any difference between the carrying amount of the liability at the modification date and the amount recognized in equity at the same date would be recognized in profit and loss immediately.

Amendments to IAS 40 Investment Property

The amendments clarify that a transfer to, or from, investment property necessitates an assessment of whether a property meets the definition of investment property, supported by observable evidence that a change in use has occurred. The amendments further clarify that the situations listed in IAS 40 are not exhaustive and that a change in use is possible for properties under construction (i.e. a change in use is not limited to completed properties).

Amendments to IFRIC 22 Foreign Currency Transactions and Advance Consideration

The interpretation addresses how to determine the date of transaction for the purpose of determining the exchange rate to use on initial recognition of an asset, expense or income (or part of them) as a result of the derecognition of a non-monetary asset or non-monetary liability (e.g., a non-refundable deposit or deferred revenue) which were previously recognized due to the fact that consideration was paid or received in advance in a foreign currency. The interpretation specifies that the date of transaction is the date on which the entity initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration. If there are multiple payments or receipts in advance, the interpretation requires an entity to determine the date of transaction for each payment or receipt of advance consideration.

Annual Improvements to IFRS 2014-2016 Cycle

The amendments include partial amendments to IFRS 1 First-time Adoption of IFRS and IAS 28 Investments in Associates and Joint Ventures. Amendments to IAS 28 provide that an investment company such as a venture capital investment vehicle may selectively designate each of its investment in associates and/or joint ventures to be measured at fair value through profit or loss mandatorily measured at fair value, and that such designation must be made at the time of each investment s initial recognition. In addition, when non-investment companies apply equity method to investment in associates and/or joint ventures that are investment companies, these companies may apply the same fair value measurement used by the said associates to value their own subsidiaries. This accounting treatment may be selectively applied to each associate.

The amendments, except for IFRS 9 and IFRS 15, do not have significant impact on the consolidated financial statements of the Group.

2) The Group has not applied the following IFRS that have been issued but are not yet effective:

IFRS 16 Leases(enacted)

IFRS 16 introduces a comprehensive model for the identification of lease arrangements and accounting treatments for both lessors and lessees. IFRS 16 will supersede the current lease guidance including IAS 17 Leases and the related interpretations, and will be applied to periods beginning on or after January 1, 2019.

The Group plans to apply modified retrospective approach as of January 1, 2019 in accordance with IFRS 16. Therefore, the cumulative effect of applying IFRS 16 will be adjusted in the retained earnings (or, where appropriate, other components of equity) at the date of initial application, and the comparative financial statements will not be restated.

IFRS 16 distinguishes leases and service contracts on the basis of whether an identified asset is controlled by a customer. Distinctions of operating leases and finance leases are removed for lessee accounting, and is replaced by model where a right-of-use asset and corresponding liability have to be recognized for all leases by lessees except for short-term leases and leases of low value assets.

The right-of-use asset is initially measured at cost and subsequently measured at cost (subject to certain exceptions) less accumulated depreciation and impairment losses, adjusted for any remeasurement of the lease liability. The lease liability is initially measured at the present value of the lease payments that are not paid at that date. Subsequently, the lease liability is adjusted for interest and lease payments, as well as the impact of lease modifications, amongst others. Furthermore, the classification of cash flows will also be affected as operating lease payments under IAS 17 are presented as operating cash flows; whereas under the IFRS 16 model, the lease payments will be split into a principal and an interest portion which will be presented as financing and operating cash flows respectively.

In contrast to lessee accounting, IFRS 16 substantially carries forward the lessor accounting requirements in IAS 17, and continues to require a lessor to classify a lease either as an operating lease or a finance lease. Also, IFRS 16 requires expanded disclosures.

According to the preliminary assessment of the Group, the lease agreements entered into by the Group as of December 31, 2018 are expected to meet the definition of lease under the Standard, and accordingly, if the Group adopts the Standard, it applies to all leases except short-term leases and leases of low value assets, and the Group will recognize the right-of-use assets and related liabilities accordingly. As a result of an analysis of the impact on consolidated financial statements, the Group expects right-of-use asset and lease liability to both increase by 338,914 million Won as of December 31, 2018.

The following enacted/amended standards are not expected to affect the Group:

IFRIC 23 Uncertainty over Income Tax Treatments (enacted)

Amendments to *IFRS 9*

Amendments to *IAS 28*

Amendments to *IAS 19*

Amendments to *IFRS 15*

Annual Improvements to IFRS 2015-2017 Cycle

These annual improvements contain partial amendments to IAS 12 Income taxes , IAS 23 Borrowing costs , IFRS 3(R) Business combinations and IFRS 11 Joint arrangements .

(2) Basis of consolidated financial statement presentation

The consolidated financial statements incorporate the financial statements of Woori Financial Group and the entities (including structured entities) controlled by Woori Financial Group (and its subsidiaries, which is the Group). Control is achieved where the Group 1) has the power over the investee, 2) is exposed, or has rights, to variable returns from its involvement with the investee, and 3) has the ability to use its power to affect its returns. The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

When the Group has less than a majority of the voting rights of an investee, it has power over the investee when the voting rights are sufficient to give it the practical ability to direct the relevant activities of the investee unilaterally. The Group considers all relevant facts and circumstances in assessing whether or not the Group s voting rights in an investee are sufficient to give it power, including:

The relative size of the Group s holding of voting rights and dispersion of holdings of the other vote holders;

Potential voting rights held by the Group, other vote holders or other parties;

Rights arising from other contractual arrangements;

Any additional facts and circumstances that indicate that the Group has, or does not have, the current ability to direct the relevant activities at the time that decisions need to be made, including voting patterns at previous shareholders meetings.

Income and expenses of subsidiaries acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the date the Group gains control until the date when the Group ceases to control the subsidiary. Profit or loss and each component of other comprehensive income are attributed to the owner of the Group and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owner of the Group and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Where necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group s accounting policies.

All intra-group transactions and, related assets and liabilities, income and expenses are eliminated in full on consolidation.

Changes in the Group s ownership interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Group s interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to the owner of the parent company.

When the Group loses control of a subsidiary, a gain or loss on disposal is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the previous carrying amount of the assets (including goodwill), and liabilities of the subsidiary and any non-controlling interests. When assets of the subsidiary are carried at revalued amounts or fair values and the related cumulative gain or loss has been recognized in other comprehensive income and accumulated in equity, the amounts previously recognized in other comprehensive income and accumulated in equity are accounted for as if the Group had directly disposed of the relevant assets (i.e. reclassified to profit or loss or transferred directly to retained earnings). The fair value of any investment retained in the former subsidiary at the date when control is lost is recognized as the fair value on initial recognition for subsequent accounting under IFRS 9 Financial Instruments or, when applicable, the cost on initial recognition of an investment in an associate or a joint venture.

(3) Business combinations

Acquisitions of subsidiaries and businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured as the sum of the acquisition-date fair values of the assets transferred by the Group in exchange for control of the acquiree, liabilities assumed by the Group for the former owners of the acquiree and the equity interests issued by the Group. Acquisition-related costs are generally recognized in profit or loss as incurred.

At the acquisition date, the acquiree s identifiable assets, liabilities and contingent liabilities that meet the condition for recognition under IFRS 3(R) are recognized at their fair value, except that:

- deferred tax assets or liabilities and assets or liabilities related to employee benefit arrangements are recognized and measured in accordance with IAS 12 Income Taxes and IAS 19 Employee Benefits, respectively;

liabilities or equity instruments related to share-based payment arrangements of the acquiree or share-based payment arrangements of the Group entered into to replace share-based payment arrangements of the acquiree are measured in accordance with IFRS 2 Share-based Payment at the acquisition date; and

non-current assets (or disposal groups) that are classified as held for sale in accordance with IFRS 5 Non-current Assets Held for Sale and Discontinued Operations are measured at the lower of their previous carrying amounts and fair value less costs to sell.

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Any excess of the sum of the consideration transferred, the amount of any non-controlling interest in the acquiree and the fair value of the Group s previously held equity interest (if any) in the acquiree over the net of identifiable assets and liabilities assumed of the acquiree at the acquisition date is recognized as goodwill which is included in intangible assets.

If, after reassessment, the Group s interest in the fair value of the acquiree s identifiable net assets exceeds the sum of the consideration transferred, the amount of any non-controlling interest in the acquiree and the fair value of the acquirer s previously held equity interest in the acquiree (if any), the excess is recognized immediately in net income as a bargain purchase gain.

Non-controlling interests that are present ownership interests and entitle their holders to a proportionate share of the entity s net assets in the event of liquidation may be initially measured either at fair value or at the non-controlling interests proportionate share of the recognized amounts of the acquiree s identifiable net assets. The choice of measurement basis is made on a transaction-by-transaction basis. Other types of non-controlling interests are measured at fair value.

When the consideration transferred by the Group in a business combination includes assets or liabilities resulting from a contingent consideration arrangement, the contingent consideration is measured at its acquisition-date fair value and included as part of the consideration transferred in a business combination. Changes in the fair value of the contingent consideration that qualify as measurement period adjustments are adjusted retrospectively, with corresponding adjustments against goodwill. Measurement period adjustments are adjustments that arise from additional information obtained during the measurement period (which cannot exceed one year from the acquisition date) about facts and circumstances that existed at the acquisition date.

The subsequent accounting for changes in the fair value of the contingent consideration that do not qualify as measurement period adjustments depends on how the contingent consideration is classified. Contingent consideration that is classified as equity is not remeasured at subsequent reporting dates and its subsequent settlement is accounted for within equity. Contingent consideration other than the above is remeasured at subsequent reporting dates as appropriate, with the corresponding gain or loss being recognized in profit or loss.

When a business combination is achieved in stages, the Group s previously held equity interest in the acquiree is remeasured at fair value at the acquisition date (i.e., the date when the Group obtains control) and the resulting gain or loss, if any, is recognized in net income(or other comprehensive income, if applicable). Amounts arising from changes in value of interests in the acquiree prior to the acquisition date that have previously been recognized in other comprehensive income are recognized, identical to the treatment assuming interests are sold directly.

In case where i) a common entity ultimately controls over all participating entities, or businesses, in a business combination transaction, prior to and after the transaction continuously, and ii) the control is not temporary, the transaction meets the definition of business combination under common control and it is deemed that the transaction only results in the changes in legal substance, and not economic substance, from the perspective of the ultimate controlling party. Thus, in such transactions, the acquirer recognizes the assets and liabilities of the acquiree in its financial statements at the book values as recognized in the ultimate controlling party s consolidated financial statements, and the difference between the book value of consideration transferred to and the book value of net assets transferred in is recognized as equity.

(4) Investments in joint ventures and associates

An associate is an entity over which the Group has significant influence, and that is not a subsidiary or a joint venture. Significant influence is the power to participate in making decision on the financial and operating policy of the investee but is not control or joint control over those policies.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to net assets relating to 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 net income of current period and the financial assets and liabilities of the joint ventures and associates are incorporated in these consolidated financial statements using the equity method of accounting, except when the investment is classified as held for sale, in which case it is accounted for in accordance with IFRS 5 Non-current Assets Held for Sale and Discontinued Operations. Under the equity method, an investment in the joint ventures and associates is initially recognized in the consolidated statements of financial position at cost and adjusted thereafter to recognize the Group s share of the net assets of the joint ventures and associates and any impairment. When the Group s share of losses of the joint ventures and associates exceeds the Group s interest in the associate, the Group discontinues recognizing its share of further losses. Additional losses are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the joint ventures and associates.

Any excess of the cost of acquisition over the Group s share of the net fair value of the identifiable assets, liabilities and contingent liabilities of the joint ventures and associates recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment. Any excess of the Group s share of the net fair value of the identifiable assets, liabilities and contingent liabilities over the cost of acquisition is recognized immediately in net income.

Upon a loss of significant influence over the joint ventures and associates, the Group discontinues the use of the equity method and measures at fair value of any investment that the Group retains in the former joint ventures and associates from the date when the Group loses significant influence. The fair value of the investment is regarded as its fair value on initial recognition as a financial asset in accordance with IFRS 9 Financial Instruments; Recognition and Measurement. The Group recognized differences between the carrying amount and fair value in net income and it is included in determination of the gain or loss on disposal of joint ventures and associates. The Group accounts for all amounts recognized in other comprehensive income in relation to that joint ventures and associates on the same basis as would be required if the joint ventures and associates had directly disposed of the related assets or liabilities. Therefore, if a gain or loss previously recognized in other comprehensive income by an associate would be reclassified to net income on the disposal of the related assets or liabilities, the Group reclassifies the gain or loss from equity to net income as a reclassification adjustment.

When the Group s ownership of interest in an associate or a joint venture decreases but the Group continues to maintain significant influence over an associate or a joint venture, the Group reclassifies to profit or loss the proportion of the gain or loss that had previously been recognized in other comprehensive income relating to that decrease in ownership interest if the gain or loss would be reclassified to profit or loss on the disposal of the related assets or liabilities. Meanwhile, if interest on associate or joint venture meets the definition of non-current assets held for sale, it is accounted for in accordance with IFRS 5.

The requirements of IAS 28 Investments in Associates and Joint Ventures to determine whether there has been a loss event are applied to identify whether it is necessary to recognize any impairment loss with respect to the Group s investment in the joint ventures and associates. When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with IAS 36 *Impairment of Assets* as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs to sell) with its carrying amount. Any impairment loss recognized is not allocated to any asset (including goodwill), which forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized in accordance with IAS 36 to the extent that the recoverable amount of the investment subsequently increases.

The Group continues to use the equity method when an investment in an associate becomes an investment in a joint venture or an investment in a joint venture becomes an investment in an associate. There is no remeasurement to fair value upon such changes in ownership interests.

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When a subsidiary transacts with an associate or a joint venture of the Group, profits and losses resulting from the transactions with the associate or joint venture are recognized in the Group s consolidated financial statements only to the extent of interests in the associate or joint venture that are not related to the Group.

(5) Investment in Joint operation

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to 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.

When the Group operates as a joint operator, it recognizes in relation to its interest in a joint operation:

- its assets, including its share of any assets held jointly;
- its liabilities, including its share of any liabilities incurred jointly;
- its revenue from the sale of its share of the output arising from the joint operation;
- its share of the revenue from the sale of the output by the joint operation; and
- its expenses, including its share of any expenses incurred jointly.

The Group accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the IFRSs applicable to the particular assets, liabilities, revenues and expenses.

When the Group enters into a transaction with a joint operation in which it is a joint operator, such as a sale or contribution of assets, it is conducting the transaction with the other parties to the joint operation and, as such, the Group recognizes gains and losses resulting from such a transaction only to the extent of the other parties interests in the joint operation.

When the Group enters into a transaction with a joint operation in which it is a joint operator, such as a purchase of assets, it does not recognize proportional share of profit or loss until the asset is sold to a third party.

(6) Revenue recognition

IAS 18 allowed recognition of fees and commission income, a revenue from contracts with customers, in accordance with the accrual principle. However, IFRS 15, applicable from the current period, requires the recognition of revenues based on transaction price allocated to the performance obligation when or as the Group performs that obligation to the customer. Since revenues other than those from contracts with customers, such as interest revenue and loan origination fee (cost), are measured through effective interest rate method, the revenue recognition principles are identical with those applied in the previous periods.

1) Revenues from contracts with customers

The Group recognizes revenue when the Group satisfies a performance obligation by transferring a promised good or service to a customer. When a performance obligation is satisfied, the Group shall recognizes as a revenue the amount of the transaction price that is allocated to that performance obligation. The transaction price is the amount of consideration to which the Group expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

The Group is recognizing revenue by major sources as shown below:

1) Fees and commission received for brokerage

The fees and commission received for agency are the amount of consideration or fee expected to be entitled to receive in return for providing goods or services to the other parties with the Group acting as an agency, such as in the case of sales of bancassurance and beneficiary certificates. The majority of these fees and commission received for brokerage are from the business activities relevant to Consumer banking segment.

2) Fees and commission received related to credit

The fees and commission received related to credit mainly include the lending fees received from the loan activity and the fees received in the L/C transactions. Except for the fees and commission accounted for in calculating the effective interest rate, it is generally recognized when the performance obligation has been performed. The majority of these fees and commission received related to credit are from the business activities relevant to Consumer banking and Corporate banking segment.

3) Fees and commission Received for electronic finance

The fees and commission received for electronic finance include fees received in return for providing various kinds of electronic financial services through firm-banking and CMS. These fees are recognized as revenue immediately upon the completion of services. The majority of these fees and commission received for electronic finance are from the business activities relevant to Consumer banking and Corporate banking segment.

4) Fees and commission received on foreign exchange handling

The fees and commission received on foreign exchange handling consist of various fees incurred when transferring foreign currency. The point of processing the customer s request is the time when performance obligation is satisfied, and revenue is immediately recognized when fees and commission are received after requests are processed. The business activities relevant to these fees and commission received on foreign exchange handling are substantially attributable to Corporate banking segment.

5) Fees and commission received on foreign exchange

The fees and commission received on foreign exchange consist of fees related to the issuance of various certificates, such as exchange, import and export performance certificates, purchase certificates, etc. The point of processing the customer s request is the time when performance obligation is satisfied, and revenue is immediately recognized when fees and commission are received after requests are processed. The business activities relevant to these fees and commission received on foreign exchange are substantially attributable to Corporate banking segment.

6) Fees and commission received for guarantee

The fees and commission received for guarantee include the fees received for the various warranties. The activities related to the warranty consist mainly of performance obligations satisfied over time and fees and commission are recognized over the guarantee period. The business activities relevant to these fees and commission received for guarantee are substantially attributable to Corporate banking segment.

7) Fees and commission received on credit card

The fees and commission received on credit card consist mainly of merchant account fees and annual fees. The Group recognizes merchant account fees by multiplying agreed commission rate to the amount paid by using the credit card. The annual fees are performance obligation satisfied over time and are recognized over agreed periods after the annual fees are paid in advance. The business activities relevant to these fees and commission received on credit card are substantially attributable to Credit cards segment.

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8) Fees and commission received on securities business

The fees and commission received on securities business consist mainly of fees and commission for the sale of beneficiary certificates, and these fees are recognized when the beneficiary certificates are sold to customers. The business activities relevant to these fees and commission received on securities business are substantially attributable to Consumer banking segment.

9) Fees and commission from trust management

The fees and commission from trust management consist of fees and commission received in return for the operation and management services for entrusted assets. These operation and management services are performance obligations satisfied over time, and revenue is recognized over the service period. Among the fees and commission from trust management, variable considerations such as profit commission that are affected by the value of entrusted assets and base return of the future periods are recognized as revenue when limitations to the estimates are lifted. The majority of these fees and commission received for brokerage are from the business activities relevant to Consumer banking segment.

10) Fees and commission received on credit Information

The fees and commission received on credit Information are composed of the fees and commission received by performing credit investigation and proxy collection services. Credit investigation fees and commission are the amount received in return for verifying the information requested by the customer and are recognized as revenue at the time the verification is completed. Proxy collection service fees are recognized by multiplying the applicable rate to the collected amount at the time when collection services are completed. The majority of these fees and commission received for brokerage are from the business activities relevant to Consumer banking segment.

11) Other fees

Other fees are usually fees related to remittances, but include fees related to various other services provided to customers by the Group. These fees are recognized when transactions occur at the customers request and services are provided, at the same time when commission are received. These other fees occur across all operating segments and no single operating segment represent majority of other fees.

2) Revenues from sources other than contracts with customers

1) Interest income

Interest income on financial assets measured at FVTOCI and financial assets at amortized costs is measured using the effective interest method.

The effective interest method is a method of calculating the amortized cost of a debt instrument and of allocating the interest income over the expected life of the asset. The effective interest rate is the rate that exactly discounts estimated future cash flows to the instrument s initial unamortized cost over the expected period, or shorter if appropriate. Future cash flows include commissions and cost of reward points(limited to the primary component of effective interest rate) and other premiums or discounts that are paid or received between the contractual parties when calculating the effective interest rate, but does not include expected credit losses. All contractual terms of a financial instrument are considered when estimating future cash flows.

For purchased or originated credit-impaired financial assets, interest revenue is recognized by applying the credit-adjusted effective interest rate to the amortized cost of the financial asset from initial recognition. Even if the financial asset is no longer impaired in the subsequent periods due to credit improvement, the basis of interest revenue calculation is not changed from amortized cost to unamortized cost of the financial assets.

2) Loan origination fees and costs

The commission fees earned on loans, which is part of the effective interest of loans, is accounted for as deferred origination fees. Incremental costs related to the origination of loans are accounted for as deferred origination fees and is being added or deducted to/from interest income on loans using effective interest rate method.

(7) Accounting for foreign currencies

The Group s consolidated financial statements are presented in Korean won, which is the functional currency of the Group. At the end of each reporting period, monetary assets and liabilities denominated in foreign currencies are translated to the functional currency at its prevailing exchange rates at the date. The effective portion of the changes in fair value of a derivative that qualifies as a cash flow hedge and the foreign exchange differences on monetary items that form part of net investment in foreign operations are recognized in equity.

Assets and liabilities of the foreign operations subject to consolidation are translated into Korean Won at foreign exchange rates at the end of the reporting period. Except for situations in which it is required to use exchange rates at the date of transaction due to significant changes in exchange rates during the period, items that belong to profit or loss shall be measured by average exchange rate, with foreign exchange differences recognized as other comprehensive income and added to equity (allocated to non-controlling interests, if appropriate). When foreign operations are disposed, the controlling interest s share of accumulated foreign exchange differences related to such foreign operations will be reclassified to profit or loss, while non-controlling interest s corresponding share will not be reclassified.

Adjustments to fair value of identifiable assets and liabilities, and goodwill arising from the acquisition of foreign operations will be treated as assets and liabilities of the corresponding foreign operation, and is translated using foreign exchange rates at the end of the period. The foreign exchange differences are recognized in equity.

(8) Cash and cash equivalents

The Group is classifying cash on hand, demand deposits, interest-earning deposits with original maturities of up to three months on acquisition date, and highly liquid investments that are readily convertible to known amounts of cash and subject to an insignificant risk of changes in value as cash and cash equivalents.

(9) Financial assets and financial liabilities

The Group s accounting policies in accordance with the newly adopted IFRS 9 are as follows:

1) Financial assets

A regular way purchase or sale of financial assets is recognized or derecognized on the trade or settlement date. A regular way purchase or sale is a purchase or sale of a financial asset under a contract whose term requires delivery of the asset within the time frame established generally by regulation or convention in the marketplace concerned.

On initial recognition, financial assets are classified into financial assets at FVTPL, financial assets at FVTOCI, and financial assets at amortized cost.

a) Business model

The Group evaluates the way business is being managed, and the purpose of the business model for managing a financial asset best reflects the way information is provided to the management at its portfolio level. Such information considers the following:

- The accounting policies and purpose specified for the portfolio, the actual operation of such policies. This includes strategy of the management focusing on the receipt of contractual interest revenue, maintaining a certain level of interest income, matching the duration of financial assets and the duration of corresponding liabilities to obtain the asset, and outflow or realization of expected cash flows from disposal of assets

- The way the performance of a financial asset held under the business model is evaluated, and the way such evaluation is being reported to the management

- The risk affecting the performance of the business model (and financial assets held under the business model), and the way such risk is being managed

- The compensation plan for the management (e.g. whether the management is being compensated based on the fair value of assets or based on contractual cash flows received)

- Frequency, amount, timing and reason for sale of financial assets in the past, and forecast of future sale activities.

b) Contractual cash flows

The principal is defined to be the fair value of a financial assets at initial recognition. Interest is not only composed of consideration for the time value of money, consideration for the credit risk related to remaining principal at a certain period of time, and consideration for other cost (e.g. liquidity risk and cost of operation) and fundamental risk associated with lending, but also profit.

When evaluating whether contractual cash flows are solely payments of principal and interests, the Group considers the contractual terms of the financial instrument. When a financial asset contains contractual conditions that modify the timing and amount of contractual cash flows, it is required to determine whether contractual cash flows that arise during the remaining life of the financial instrument due to such contractual condition are solely payments of principal and interest. The Group considers the following elements when evaluating the above:

- Conditions that lead to modification of timing or amount of cash flows

- Contractual terms that adjusts contractual nominal interest, including floating rate feature

Early payment features and maturity extension features

Contractual terms that limit the Group s claim on cash flows arising from certain assets (e.g. non-recourse feature)

1) Financial assets at FVTPL

The Group is classifying those financial assets that are not classified as either financial assets at amortized cost or financial assets at FVTOCI, and those designated to be measured at FVTPL, as financial assets at FVTPL. Financial assets at FVTPL are measured at fair value, and related profit or loss is recognized in net income. Transaction costs related to acquisition at initial recognition is recognized in net income immediately upon its occurrence.

It is possible to designate a financial asset as financial asset at FVTPL if at initial recognition: (a) it is possible to remove or significantly reduce recognition or measurement mismatch that may otherwise have occurred if not for its designation as financial asset at FVTPL; (b) the financial asset forms part of the Group s financial instrument group (A group composed of a combination of financial asset or liability), is measured at fair value and is being evaluated for its performance, and such information is provided internally; and (c) the financial asset is part of a contract that contains one or more of embedded derivatives, and is a hybrid contract in which designation as financial asset at FVTPL is allowed under IFRS 9 Financial Instruments . However, the designation is irrevocable.

2) Financial assets at FVTOCI

When financial assets are held under a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets, and when contractual cash flows from such financial assets are solely payments of principal and interest, the financial assets are classified as financial assets at FVTOCI. Also, for investments in equity instruments that are not held for short-term trade, an irrevocable election is available at initial recognition to present subsequent changes in fair value as other comprehensive income. At initial recognition, financial assets at FVTOCI is measured at its fair value plus any direct transaction cost, and is subsequently measured in fair value.

However, for equity instruments that do not have a quotation in an active market and in which fair value cannot be measured reliably, they are measured at cost. The changes in fair value except for profit or loss items such as impairment losses (reversals), interest revenue calculated by using effective interest method, and foreign exchange gain or loss, and related income tax effects are recognized as other comprehensive income until the asset s disposal. Upon derecognition, the accumulated other comprehensive income is reclassified from equity to net income for FVTOCI (debt instrument), and reclassified within the equity for FVTOCI (equity instruments).

3) Financial assets at amortized cost

When financial assets are held under a business model whose objective is to hold financial assets in order to collect contractual cash flows, and when contractual cash flows from such financial assets are solely payments of principal and interest, the financial assets are classified as financial assets at amortized cost. At initial recognition, financial assets at amortized cost are recognized at fair value plus any direct transaction cost. Financial assets at amortized cost is presented at amortized cost using effective interest method, less any loss allowance.

2) Financial liabilities

At initial recognition, financial liabilities are classified into either financial liabilities at FVTPL or financial liabilities at amortized cost.

Financial liabilities are usually classified as financial liabilities at FVTPL when they are acquired with a purpose to repurchase them within a short period of time, when they are part of a certain financial instrument portfolio that is actually and recently being managed with a purpose of short-term profit and joint management by the Group at initial recognition, and when they are derivatives that do not qualify as hedging instruments. Financial liabilities at FVTPL are measured at fair value plus direct transaction cost at initial recognition, and are subsequently measured at fair value. Profit or loss arising from financial liabilities at FVTPL is recognized in net income when occurred.

It is possible to designate a financial liability as financial liability at FVTPL if at initial recognition: (a) it is possible to remove or significantly reduce recognition or measurement mismatch that may otherwise have occurred if not for its designation as financial liability at FVTPL; (b) the financial asset forms part of the Group s financial instrument group (A group composed of a combination of financial asset or liability) according to the Group s documented risk management or investment strategy, is measured at fair value and is being evaluated for its performance, and such information is provided internally; and (c) the financial liability is part of a contract that contains one or more of embedded derivatives, and is a hybrid contract in which designation as financial liability at FVTPL is allowed under IFRS 9 Financial Instruments .

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Financial liabilities designated as at FVTPL are initially recognized at fair value, with any direct transaction cost recognized in profit or loss, and are subsequently measured at fair value. Any profit or loss from financial liabilities at FVTPL are recognized in profit or loss.

Financial liabilities not classified as financial liabilities at FVTPL are measured at amortized cost. The Group is classifying liabilities such as deposits due to customers, borrowings and debentures as financial liabilities at amortized cost.

3) Reclassification

Financial assets are not reclassified after initial recognition unless the Group modifies the business model used to manage financial assets. When the Group modifies the business model used to manage financial assets, all affected financial assets are reclassified on the first day of the first reporting period after the modification.

4) Derecognition

Financial assets are derecognized when contractual rights to cash flows from the financial assets are expired, or when substantially all of risk and reward for holding financial assets is transferred to another entity as a result of a sale of financial assets. If the Group does not have and does not transfer substantially all of the risk and reward of holding financial assets with control of the transferred financial assets retained, the Group recognizes financial assets to the extent of its continuing involvement. If the Group holds substantially all the risk and reward of holding a financial asset, it continues to recognize that asset and proceeds are accounted for as collateralized borrowings.

When a financial asset is fully derecognized, the difference between the book value and the sum of proceeds and accumulated other comprehensive income is recognized as profit or loss in case of FVTOCI (debt instruments), and as retained earnings for FVTOCI (equity instruments).

In case when a financial asset is not fully derecognized, the Group allocates the book value into amounts retained in the books and removed from the books, based on the relative fair value of each portion at the date of sale, and based on the degree of continuing involvement. For the derecognized portion of the financial assets, the difference between its book value and the sum of proceeds and the portion of accumulated other comprehensive income attributable to that portion will be recognized in profit or loss in case of debt instruments and recognized in retained earnings in case of equity instruments. The accumulated other comprehensive income is distributed to the portion of book value retained in the books, and to the portion of book value removed from the books.

The Group derecognizes financial liabilities when, and only when, the Group s obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

When the Group exchanges with the existing lender one debt instrument into another one with the substantially different terms, such exchange is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. Similarly, the Group accounts for substantial modification of terms of an existing liability or part of it as an extinguishment of the original financial liability and the recognition of a new liability. It is assumed that the terms are substantially different if the discounted present value of the cash flows under the new terms, including any fees paid net of any fees received and discounted using the original effective rate, is at least 10 percent different from the discounted present value of the remaining cash flows of the original financial liability.

5) Fair value of financial instruments

Financial assets at FVTPL and financial assets at FVTOCI are measured and presented in consolidated financial statements at their fair values, and all derivatives are also subject to fair value measurement.

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Fair value is defined as the price that would be received to exchange an asset or paid to transfer a liability in a recent transaction between independent parties that are reasonable and willing. Fair value is the transaction price of identical financial assets or financial liabilities generated in an active market. An active market is a market where trade volume is sufficient and objective price information is available due to the fact that bid and ask price differences are small.

When trade volume of a financial instrument is low, when transaction prices within the market show large differences among them, or when it cannot be concluded that a financial instrument is being traded within an active market due to disclosures being extremely shallow, fair value is measured using valuation techniques based on alternative market information or using internal valuation techniques based on general and observable information obtained from objective sources. Market information includes maturity and characteristics, duration, similar yield curve, and variability measurement of financial instruments of similar nature. Fair value amount contains unique assumptions on each entity (the Group concluded that it is using assumptions applied in valuing financial instruments in the market, or risk-adjusted assumptions in case marketability does not exist).

The market approach and income approach, which are valuation techniques used to estimate the fair value of financial instruments, both require significant judgment. Market approach measures fair value using either a recent transaction price that includes the financial instrument, or observable information on comparable firm or assets. Income approach measures fair value through discounting future cash flows with a discount rate reflecting market expectations, and revenue, operating income, depreciation, capital expenditures, income tax, working capital and estimated residual value of financial investments are being considered when deriving future cash flows. Valuation techniques such as the above include estimates based on the financial instruments complexity and usefulness of observable information in the market.

The valuation techniques used in the evaluation of financial instruments are explained below.

a) Financial assets at FVTPL and Financial assets at FVTOCI

The fair value of equity securities included in financial assets at FVTPL and financial assets at FVTOCI category is recognized in the statement of financial position at its available market price. Debt securities traded in the over-the-counter market are generally recognized at an amount computed by an independent appraiser. Especially, when the Group uses the fair value determined by independent appraisers, the Group usually obtains three values from three different appraisers for each financial instrument, and selects the minimum amount without making additional adjustments. For equity securities without marketability, the Group uses the amount determined by the independent appraiser. The Group verifies the prices obtained from appraisers in various ways, including the evaluation of independent appraisers competency, indirect verification through comparison between appraisers price and other available market information, and reperformance done by employees who have knowledge of valuation models and assumptions that appraisers used.

b) Derivatives

The Group s transactions involving derivatives such as futures and exchange traded options are measured at market value. For exchange traded derivatives classified as level 2 in the fair value hierarchy, the fair value is estimated using internal valuation techniques. If there are no publicly available market prices because they are traded over-the-counter, fair value is measured through internal valuation techniques. When using internal valuation techniques to derive fair value, the types of derivatives, base interest rate or characteristics of prices, or stock market indices are considered. When variables used in the internal valuation techniques are not observable information in the market, such variables may contain significant estimates.

c) Adjustment of valuation amount

The Group is exposed to credit risk when counterparty to a derivative contract does not perform its contractual obligation, and the exposure amount is equal to the amount of derivative asset recognized in the statement of financial position. When the Group earns income through valuation of derivatives, such income is recognized as derivative asset in the statement of financial position. Some of the derivatives are traded in the market, but most of the derivatives are measured at estimated fair value derived from internal valuation models that use observable information in the market. As such, in order to estimate the fair value there should be an adjustment made to incorporate counterparty s credit risk, and credit risk adjustment is being considered when valuing derivative assets such as over-the counter derivatives. The amount of financial liabilities is also adjusted by the Group s own credit risk when valuing them.

The amount of adjustment is derived from counterparty s probability of default and loss given default. This adjustment considers contractual matters that are designed to reduce the Group s exposure to each counterparty s credit risk. When derivatives are under master netting arrangement, the exposure used in the computation of credit risk adjustment is a net amount after adding/deducting cash collateral received (or paid) from loss(or gain) position derivatives with the same counterparty.

6) Expected credit losses on financial assets

The Group recognizes loss allowance on expected credit losses for the following assets:

- Financial assets at amortized cost
- Debt instruments measured at FVTOCI
- Contract assets as defined by IFRS 15

Expected credit losses are weighted-average value of a range of possible results, considering the time value of money, and are measured by incorporating information on current conditions and forecasts of future economic conditions that are available without undue cost or effort.

The methods to measure expected credit losses are classified into following three categories in accordance with IFRS:

- General approach: Financial assets that does not belong to below two models and unused loan commitments
- Simplified approach: When financial assets are either trade receivables, contract assets or lease receivables
- Credit impairment model: Purchased or originated credit-impaired financial assets

The measurement of loss allowance under general approach is differentiated depending on whether the credit risk has increased significantly after initial recognition. That is, loss allowance is measured based on 12-month expected credit loss when the credit risk has not increased significantly after initial recognition, while loss allowance is measured at lifetime expected credit loss when credit risk has increased significantly. Lifetime is the expected remaining life of the financial instrument up to the maturity date of the contract.

The measurement of loss allowance under simplified approach is always based on lifetime expected credit loss, and loss allowance under credit impairment model is measured as the cumulative change in lifetime expected credit loss since initial recognition.

a) Measurement of expected credit losses on financial asset at amortized cost

The expected credit losses on financial assets at amortized cost is measured by the difference between the contractual cash flows during the period and the present value of expected cash flows. Expected cash inflows are computed for individually significant financial assets in order to calculate expected credit losses.

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When financial assets that are not individually significant, they are included in a group of financial assets with similar credit risk characteristics and expected credit losses of the group are calculated collectively.

Expected credit losses are deducted through loss allowance account, and when the financial asset is determined to be uncollectible, the loss allowance is written off from the books along with the related financial asset. When loan receivable previously written off is subsequently collected, the related loss allowance is increased and changes in loss allowance are recognized in profit or loss.

b) Measurement of expected credit losses on financial asset at FVTOCI

The measurement method of expected credit loss is identical to financial asset at amortized cost, but changes in the loss allowance is recognized in other comprehensive income. When financial assets at FVTOCI is disposed or repaid, the related loss allowance is reclassified from other comprehensive income to net income.

The comparative financial statements for the year 2017 are prepared in accordance with IAS 39.

1) Financial assets

A regular way purchase or sale of financial assets is recognized or derecognized on the trade or settlement date. A regular way purchase or sale is a purchase or sale of a financial asset under a contract whose term requires delivery of the asset within the time frame established generally by regulation or convention in the marketplace concerned.

On initial recognition, financial assets are classified into financial assets at fair value through profit or loss (FVTPL), AFS financial assets, held-to-maturity (HTM) and loans and receivables.

1) Financial assets at FVTPL

The Group classifies financial assets as financial assets measured at FVTPL when they are either held for trading or designated to be measured at FVTPL. Financial assets acquired with the purpose of selling in the near term are classified as financial assets held for trading, and are measured at fair value with related valuation gain or loss recognized in net income. Any transaction cost related to the acquisition of financial assets at initial recognition is recognized in net income upon its occurrence.

A financial asset other than a financial asset held for trading may be designated as at FVTPL upon initial recognition if: (a) such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or (b) the financial asset forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group s documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or (c) it forms part of a contract containing one or more embedded derivatives, and IAS 39 Financial Instruments: Recognition and Measurement permits the entire combined contract (asset or liability) to be designated as at FVTPL.

Financial assets designated by the Group on initial recognition as at FVTPL are recognized at fair value, with transaction costs recognized in net income, and are subsequently measured at fair value. Gains and losses on financial assets that are designated as at FVTPL are recognized in net income as they arise.

2) AFS financial assets

Financial assets that are not classified as HTM, financial assets at FVTPL, or loans and receivables, are classified as AFS. Financial assets can be designated as AFS on initial recognition. AFS financial assets are initially recognized at fair value plus directly related transaction costs. They are subsequently measured at fair value. Unquoted equity investments whose fair value cannot be measured reliably are carried at cost and classified as AFS financial assets. Impairment losses in monetary and non-monetary AFS financial assets and dividends on non-monetary financial assets are recognized in net income. Interest revenue on monetary financial assets is calculated using the effective interest method. Other changes in the fair value of AFS financial assets and any related tax are reported in a separate component of shareholders equity until disposal, when the cumulative gain or loss is recognized in net income.

3) HTM financial assets

A financial asset may be classified as a HTM investment only if it has fixed or determinable payments, a fixed maturity, and the Group has the positive intention and ability to hold the financial asset to maturity. HTM investments are initially recognized at fair value plus directly related transaction costs. They are subsequently measured at amortized cost using the effective interest method less any impairment losses.

4) Loans and other receivables

Non-derivative financial assets with fixed or determinable repayments that are not quoted in an active market are classified as loans and receivables, except those that are classified as AFS or as held-for-trading, or designated as at FVTPL. Loans and receivables are initially recognized at fair value plus directly related transaction costs. They are subsequently measured at amortized cost using the effective interest method less any impairment losses. Interest income is recognized using the effective interest method, except for the short-term receivables to which the present value discount is not meaningful.

2) Financial liabilities

On initial recognition financial liabilities are classified financial liabilities at FVTPL (held for trading, and financial liabilities designated as at FVTPL) and financial liabilities measured at amortized cost.

A financial liability is classified as held-for-trading if it is incurred principally for repurchase in the near term, or forms part of a portfolio of financial instruments that are managed together and for which there is evidence of short-term profit taking, or it is a derivative (not in a qualifying hedge relationship). Held-for-trading financial liabilities are recognized at fair value with transaction costs being recognized in net income. Subsequently, they are measured at fair value. Gains and losses are recognized in net income as they arise.

A financial liability other than a financial liability held for trading may be designated as at FVTPL upon initial recognition if: (a) such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or (b) the financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group s documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or (c) it forms part of a contract containing one or more embedded derivatives, and IAS 39 Financial Instruments: Recognition and Measurement permits the entire combined contract (asset or liability) to be designated as at FVTPL.

Financial liabilities that the Group designates on initial recognition as being at FVTPL are recognized at fair value, with transaction costs being recognized in net income, and are subsequently measured at fair value. Gains and losses on financial liabilities that are designated as at FVTPL are recognized in net income as they incur.

All other financial liabilities, such as deposits due to customers, borrowings, and debentures, are measured at amortized cost using the effective interest method.

3) Reclassification

Held-for-trading and AFS financial assets that meet the definition of loans and receivables (non-derivative financial assets with fixed or determinable payments that are not quoted in an active market) may be reclassified to loans and receivables if the Group has the intention and ability to hold the financial asset for the foreseeable future or until maturity. The Group typically regards the foreseeable future as twelve months from the date of reclassification. Reclassifications are made at fair value. This fair value becomes the asset s new cost or amortized cost as appropriate. Gains and losses recognized up to the date of reclassification are not reversed.

4) Derecognition

The Group derecognizes a financial asset when the contractual right to the cash flows from the asset is expired, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another company. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognizes its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received.

On derecognition of a financial asset in its entirety, the difference between the asset s carrying amount and the sum of the consideration received and receivable and the cumulated gain or loss that had been recognized in other comprehensive income and accumulated in equity is recognized in profit or loss.

On derecognition of a financial assets other than in its entirety, the Group allocates the previous carrying amount of the financial asset between the part it continues to recognize under continuing involvement, and the part it no longer recognizes on the basis of the relative fair value of those parts on the date of the transfer. The difference between the carrying amount allocated to the part that is no longer recognized and the sum of the consideration received for the part that is no longer recognized and any cumulative gain or loss allocated to it that had been recognized in other comprehensive income is recognized in profit or loss. A cumulative gain or loss that had been recognized in other comprehensive income is allocated between the part that continues to be recognized and the part that is no longer recognized on the basis of the relative fair value of those parts.

The Group derecognizes the financial liability, when Group s obligations are discharged, canceled or expired. The difference between paid cost and the carrying amount of financial liabilities is recorded in profit or loss.

5) Fair value of financial instruments

Financial instruments classified as held-for-trading or designated as at FVTPL and financial assets classified as AFS are recognized in the financial statements at fair value. All derivatives are measured at fair value.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in and orderly transaction between market participants at the measurement date. Fair values are determined from quoted prices in active markets for identical financial assets or financial liabilities where these are available. The Group characterizes active markets as those in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.

Where a financial instrument is not in active market characterized by low transaction volumes, price quotations which vary substantially among market participants, or in which minimal information is released publicly, fair values are established using valuation techniques rely on alternative market data or internally developed models using significant inputs that are generally readily observable from objective sources. Market data includes prices of financial instruments with similar maturities and characteristics, duration, interest rate yield curves, and measures of volatility. The amount determined to be fair value may incorporate the management of the Group s own assumptions (including assumptions that the Group believes market participants would use in valuing the financial instruments and assumptions relating to appropriate risk adjustments for nonperformance and lack of marketability).

The valuation techniques used to estimate the fair value of the financial instruments include market approach and income approach, each of which involves a significant degree of judgment. Under the market approach, fair value is determined by reference to a recent transaction involving the financial instruments or by reference to observable valuation measures for comparable companies or assets. Under the income approach, fair value is determined by converting future amounts (e.g., cash flows or earnings) to a single present amount (discounted) using current market expectations about the future amounts. In determining value under this approach, the Group makes assumptions regarding, among other things, revenues, operating income, depreciation and amortization, capital expenditures, income taxes, working capital needs, and terminal value of the financial investments. These valuation techniques involve a degree of estimation, the extent of which depends on the instrument s complexity and the availability of market-based data.

The following are descriptions of valuation methodologies used by the Group to measure various financial instruments at fair value.

a) Financial assets at FVTPL and AFS financial assets

The fair value of the securities included in financial assets at FVTPL and AFS financial assets are recognized in the consolidated statements of financial position based on quoted market prices, where available. For debt securities traded in the OTC market, the Group generally determines fair value based on prices obtained from independent pricing services. Specifically, with respect to independent pricing services, the Group obtains three prices per instrument from reputable independent pricing services in Korea, and generally uses the lowest of the prices obtained from such services without further adjustment. For non-marketable equity securities, the Group obtains prices from the independent pricing services. The Group validates prices received from such independent pricing services using a variety of means, including verification of the qualification of the independent pricing services, corroboration of the pricing by comparing the prices among the independent pricing services and by reference to other available market data, and review of the pricing model and assumptions used by the independent pricing services by the Group s personnel who are familiar with market-related conditions.

b) Derivatives

Quoted market prices are used for the Group s exchange-traded derivatives, such as certain interest rate futures and option contracts. All of the Group s derivatives are traded in OTC markets where quoted market prices are not readily available are valued using internal valuation techniques. Valuation techniques and inputs to internally developed models depend on the type of derivative and nature of the underlying rate, price or index upon which the derivative s value is based. If the model inputs for certain derivatives are not observable in a liquid market, significant judgments on the level of inputs used for valuation techniques are required.

c) Adjustment of valuation amount

By using derivatives, the Group is exposed to credit risk if counterparties to the derivative contracts do not perform as expected. If counterparty fails to perform, counterparty credit risk is equal to the amount reported as a derivative asset in the consolidated statements of financial position. The amounts reported as a derivative asset are derivative contracts in a gain position. Few of the Group s derivatives are listed on an exchange. The majority of derivative positions is valued using internally developed models that use as their basis observable market inputs. Therefore, an adjustment is necessary to reflect the credit quality of each counterparty to arrive at fair value. Counterparty credit risk adjustments are applied to derivative assets, such as OTC derivative instruments, when the market inputs used in valuation models may not be indicative of the creditworthiness of the counterparty. Adjustments are also made when valuing financial liabilities to reflect the Group s own credit standing.

The adjustment is based on probability of default of a counterparty and loss given default. The adjustment also takes into account contractual factors designed to reduce the Group s credit exposure to each counterparty.

To the extent derivative assets (liabilities) are subject to master netting arrangements, the exposure used to calculate the credit risk adjustment is net of derivatives in a loss (gain) position with the same counterparty and cash collateral received (paid).

6) Impairment of financial assets

The Group assesses at the end of each reporting date whether there is any objective evidence that a financial asset or group of financial assets classified as AFS, HTM or loans and receivables is impaired. A financial asset or portfolio of financial assets is impaired and an impairment loss incurred if there is objective evidence of impairment as result of one or more events that occurred after the initial recognition asset and that event (or events) has an impact on the estimated future cash flows of the financial asset.

a) Financial assets carried at amortized cost

If there is objective evidence that an impairment loss on a financial asset or group of financial assets classified as HTM investments or as loans and receivables have been incurred, the Group measures the amount of the loss as the difference between the carrying amount of the asset or group of assets and the present value of estimated future cash flows from the asset or group of assets discounted at the effective interest rate of the instrument at initial recognition. For collateralized loans and receivables, estimated future cash flows include cash flows that may result from foreclosure less the costs of obtaining and selling the collateral.

Impairment losses are assessed individually for financial assets that are individually significant and assessed either individually or collectively for assets that are not individually significant. In making collective assessment of impairment, financial assets are grouped into portfolios on the basis of similar risk characteristics. Future cash flows from these portfolios are estimated on the basis of the contractual cash flows and historical loss experience for assets with similar credit risk characteristics. Historical loss experience is adjusted, on the basis of observable data, to reflect current conditions not affecting the period of historical experience.

Impairment losses are recognized in net income and the carrying amount of the financial asset or group of financial assets reduced by establishing a provision for impairment losses. If, in a subsequent period, the amount of the impairment loss reduces and the reduction can be ascribed to an event after the impairment was recognized (i.e., improvement in the credit quality of a debtor), the previously recognized loss is reversed by adjusting the provision. Once an impairment loss has been recognized on a financial asset or group of financial assets, interest income is recognized on the carrying amount using the rate of interest at which estimated future cash flows were discounted in measuring impairment.

It is not the Group s usual practice to write-off the asset at the time an impairment loss is recognized. Impaired loans and receivables are written off (i.e. the impairment provision is applied in writing down the loan s carrying value in full) when the Group concludes that there is no longer any realistic prospect of recovery of part or the entire loan. Amounts recovered after a loan has been written off are reflected to the provision for the period in which they are received.

b) Financial assets carried at fair value

When a decline in the fair value of a financial asset classified as AFS has been recognized directly in other comprehensive income and there is objective evidence that the asset is impaired, the cumulative loss is removed from other comprehensive income and recognized in net income. The loss is measured as the difference between the amortized cost of the financial asset and its current fair value. Impairment losses on AFS equity instruments are not reversed through net income, but those on AFS debt instruments are reversed, if there is a decrease in the cumulative impairment loss that is objectively related to a subsequent event.

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(10) Offsetting financial instruments

Financial assets and liabilities are presented as a net amount in the statements of financial position when the Group has an enforceable legal right and an intention to settle on a net basis or to realize an asset and settle the liability simultaneously.

(11) Investment properties

The Group classifies a property held to earn rentals and/or for capital appreciation as an investment property. Investment properties are measured initially at cost, including transaction costs, less subsequent depreciation and impairment.

Subsequent costs are included in the carrying amount of the asset or recognized as a separate asset if it is probable that future economic benefits associated with the assets will flow into the Group and the cost of an asset can be measured reliably, and the book value of a portion of an asset that are replaced by a subsequent expenditure is removed from the books. Routine maintenance and repairs are expensed as incurred.

While land is not depreciated, all other investment properties are depreciated based on the depreciation method and useful lives of premises and equipment. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, and when it is deemed appropriate to change them, the effect of any change is accounted for as a change in accounting estimates.

An investment property is derecognized from the consolidated financial statements on disposal or when it is permanently withdrawn from use and no future economic benefits are expected even from its disposal. The gain or loss on the derecognition of an investment property is calculated as the difference between the net disposal proceeds and the carrying amount of the property, and is recognized in profit or loss in the period of the derecognition.

(12) Premises and equipment

Premises and equipment are stated at cost less accumulated depreciation and accumulated impairment losses. The cost of an item of premises and equipment is expenditures directly attributable to their purchase or construction, which includes any cost 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. It also includes the initial estimate of costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent costs are recognized in the carrying amount of an asset or as a separate asset (if appropriate) if it is probable that future economic benefit associated with the assets will flow into the Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

While land is not depreciated, for all other premises and equipment, depreciation is charged to net income on a straight-line basis by applying the following estimated economic useful lives on the amount of cost or revalued amount less residual value.

	Useful life
Buildings used for business purpose	35 to 57 years
Structures in leased office	4 to 5 years

Properties for business purpose	4 to 5 years
Leased assets	Useful lives of the same kind or similar other premises and equipment

The Group reassesses the depreciation method, the estimated useful lives and residual values of premises and equipment at the end of each reporting period. If changes in the estimates are deemed appropriate, the

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changes are accounted for as a change in an accounting estimate. When there is an indicator of impairment and the carrying amount of a premises and equipment item exceeds the estimated recoverable amount, the carrying amount of such asset is reduced to the recoverable amount.

(13) Intangible assets and goodwill

The Group is recognizing intangible assets measured at the manufacturing cost or acquisition cost plus additional incidental expenses less accumulated amortization and accumulated impairment losses. The Group s intangible asset are amortized over the following economic lives using the straight-line method. The estimated useful life and amortization method are reviewed at the end of each reporting period. If changes in the estimates are deemed appropriate, the changes are accounted for as a change in an accounting estimate.

	Useful life
Industrial property rights	10 years
Development costs	5 years
Software, and others	4 to 5 years

In addition, when an indicator that intangible assets are impaired is noted, and the carrying amount of the asset exceeds the estimated recoverable amount of the asset, the carrying amount of the asset is reduced to its recoverable amount.

Goodwill acquired in a business combination is included in intangible assets. Goodwill is not amortized, but is subject to an impairment test at the cash-generating unit level every year, and whenever there is an indicator that goodwill is impaired.

Goodwill is allocated to each of the Group s cash-generating unit (or groups of cash-generating units) that is expected to benefit from the synergies of the combination. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit on a pro rata basis based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognized directly in profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent periods.

(14) Impairment of non-monetary assets

Intangible assets with indefinite useful lives or intangible assets that are not yet available for use are tested for impairment annually, regardless of whether or not there is any indication of impairment. All other assets are tested for impairment by estimating the recoverable amount when there is an objective indication that the carrying amount may not be recoverable. Recoverable amount is the higher of value in use or net fair value, less costs to sell. If the recoverable amount of an asset is estimated to be less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount and such impairment loss is recognized immediately in net income.

(15) Leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

1) The Group as a lessor

The Group recognizes lease receivables at the present value of minimum lease payments of a finance lease and any unguaranteed residual value. After the commencement date of the lease, accounting is done to recognize interest income over each reporting period by computing periodic interest income on the Group s net investment.

Rental income from operating leases is recognized on a straight-line basis over the lease term. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and expensed on a straight-line basis over the lease term. Operating lease assets are included within other asset category in other assets, and depreciated over their economic life.

2) The Group as a lessee

Assets held under finance leases are initially recognized as assets of the Group at their fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. The corresponding liability to the lessor is included in the separate statements of financial position as a finance lease obligation. Lease payments are apportioned between finance expenses and reduction of the lease obligation to achieve a constant rate of interest on the remaining balance of the liability. Contingent rentals arising under finance leases are recognized as expenses in the periods in which they are incurred.

Operating lease payments are recognized as an expense on a straight-line basis over the lease term, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed. Contingent rentals arising under operating leases are recognized as expenses in the period in which they are incurred.

(16) Derivative instruments

Derivative instruments are classified as forwards, futures, options and swaps, depending on the types of transactions and are classified at the point of transaction as either trading or hedging based on its purpose.

Derivatives are initially recognized at fair value at the date of contract and are subsequently measured at fair value at the end of each reporting period. The resulting gain or loss is recognized in net income immediately unless the derivative is designated and effective as a hedging instrument. If derivatives have been designated as hedging instruments and if it is effective, the point of recognition of gain or loss depends on the characteristics of hedging relationship.

1) Embedded derivatives

Embedded derivatives are components of a hybrid financial instrument that includes a non-derivative host contract. It has an effect of modifying part of cash flows of the hybrid financial instrument similar to an independent derivative.

Embedded derivatives that are part of a hybrid contract of which the host contract is a financial asset within the scope of IFRS 9 is not separated. The classification is done by considering the hybrid contract as a whole, and subsequent measurement is either at amortized cost or fair value.

If embedded derivatives are part of a hybrid contract of which the host contract is not a financial asset within the scope of IFRS 9 (e.g. financial liability), then these are treated as separate derivatives if embedded derivatives meet the definition of a derivative, characteristics & risk of the embedded derivatives are not closely related to that of host contract, and if the host contract is not measured at FVTPL.

In the previous year, all embedded derivatives which were part of a hybrid contract were treated as separate derivatives if embedded derivatives meet the definition of a derivative, characteristics & risk of the embedded derivatives are not closely related to that of host contract, and if the host contract is not measured at FVTPL.

2) Hedge accounting

The Group is applying IFRS 9 in regards to hedge accounting. The Group is designating certain derivatives as hedging instrument against fair value changes in relation to the interest rate risk, foreign currency translation and interest rate risk, and foreign currency translation risk.

The Group is documenting the relationship between hedging instruments and hedged items at the commencement of hedging in accordance with their purpose and strategy. Also, the Group documents at the commencement and subsequent dates whether the hedging instrument effectively counters the changes in fair value of hedged items. A hedging instrument is effective only when it meets all the following criteria:

When there is an economic relationship between the hedged items and hedging instruments.

When the effect of credit risk is not stronger than the change in value due to the economic relationship between the hedged items and hedging instruments.

When the hedge ratio is equal to the proportion of hedged items to the hedging instruments.

When a hedging relationship no longer meets the hedging effectiveness requirements related to hedge ratio, but when the purpose of risk management on designated hedging relationship is still maintained, the hedge ratio of the hedging relationship is adjusted so that hedging relationship may meet the requirements again (Hedge ratio readjustment).

The Group has designated derivatives as hedging instrument except for the portion on foreign currency basis spread. The fair value change due to foreign currency basis spread is recognized in other comprehensive income and is accumulated in equity. If the hedged item is related to transactions, the accumulated other comprehensive income is reclassified to profit or loss when the hedged item affects the profit or loss. However, when non-monetary items are subsequently recognized due to hedged items, the accumulated equity is removed from the equity directly, and is included in the initial book value of the recognized non-monetary items. Such transfers does not affect other comprehensive income. But if part or all of accumulated equity is not expected to be recovered in the future periods, the amount not expected to be recovered is immediately reclassified to profit or loss. If the hedged item is time-related, then the foreign currency basis spread on the day the derivative is designated as a hedging instrument that is related to the hedged item is reclassified to profit or loss over the term of the hedge.

3) Fair value hedge

Gain or loss arising from valid hedging instrument is recognized in profit or loss. However, when the hedging instrument mitigates risks on equity instruments designated as financial assets at FVTOCI, related gain or loss is recognized in other comprehensive income.

The book value of hedged items that are not measured in fair value is adjusted by the changes in fair value arising from the hedged risk, with resulting gain or loss reflected in net income. In case of debt instruments measured at FVTOCI, book value is an amount that is already adjusted to fair value and thus gain or loss arising from the hedged risk is recognized in profit or loss instead of other comprehensive income without adjustments in book value. When the hedged item is equity instruments measured at FVTOCI, the gain or loss arising from hedged risk is retained at other comprehensive income in order to match the gain or loss with hedging instruments.

Hedge accounting ceases to apply only when hedging relationship (or part of it) does not meet the requirements of hedge accounting (even after hedging relationship readjustment, if applicable). This treatment holds in case of lapse, disposal, expiry and exercise of hedging instruments, and this cease of treatment applies prospectively. The fair value adjustments made to book value of hedged item due to hedged risk is amortized from the date of discontinuance of hedge accounting and is recognized in profit or loss.

4) Cash flow hedge

The Group recognizes the effective portion of changes in the fair value of derivatives and other valid hedging instruments that are designated and qualified as cash flow hedges in other comprehensive income, to the extent of cumulative fair value changes of the hedged item from the date of hedge accounting. The gain or loss relating to the ineffective portion is recognized immediately in net income.

Amounts previously recognized in other comprehensive income and accumulated in equity are reclassified to net income when the hedged item affects net income. However, when non-monetary assets or liabilities are subsequently recognized due to expected transactions involving hedged items, the valuation gain or loss accumulated in the equity as other comprehensive income is removed from the equity and included in the initial book value of the recognized non-monetary assets or liabilities. Such transfers does not affect other comprehensive income. Also if accumulated other comprehensive income is a loss and part or all of the losses are not expected to be recovered in the future periods, the said amount is immediately reclassified to profit or loss.

Hedge accounting ceases to apply only when hedging relationship (or part of it) does not meet the requirements of hedge accounting (even after hedging relationship readjustment, if applicable). This treatment holds in case of lapse, disposal, expiry and exercise of hedging instruments, and this cease of treatment applies prospectively. At the point of cessation of cash flow hedge, the valuation gain or loss recognized as accumulated other comprehensive income continues to be recognized as equity, and is reclassified to profit or loss when the expected transaction is ultimately recognized as profit or loss. However, when transactions are no longer expected to occur, the valuation gain or loss of hedging instrument recognized as accumulated other comprehensive income is immediately reclassified to profit or loss.

(17) Assets (or disposal group) held for sale

The Group classifies a non-current asset (or disposal group) as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use. Non-current assets (and disposal groups) classified as held for sale are measured at the lower of their previous carrying amount and fair value less costs to sell.

(18) Provisions

Provisions are recognized if (a) it has present or contractual obligations as a result of the past event, (b) it is probable that an outflow of resources will be required to settle the obligation and (c) the amount of the obligation is reliably estimated. Provision is not recognized for the future operating losses.

The Group recognizes provision related to the unused membership points, payment guarantees, loan commitment and litigations. Where the Group is required to restore a leased property that is used as a branch to an agreed condition after the contractual term expires, the present value of expected amounts to be used to dispose, decommission or repair the facilities is recognized as an asset retirement obligation.

Where there are a number of similar obligations, the probability that an outflow will be required in settlement is determined by considering the obligations as a whole. Although the likelihood of outflow for any one item may be small, if it is probable that some outflow of resources will be needed to settle the obligations as a whole, a provision is recognized.

(19) Capital and compound financial instruments

The Group classifies a financial instrument that it issues as a financial liability or an equity instrument in accordance with the substance of the contractual arrangement. A financial liability is a contractual obligation to deliver cash or another financial asset to another entity. An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. The compound financial instruments are financial instruments where it is neither a financial liability nor an equity instrument because it was designed to contain both equity and debt elements.

If the Group reacquires its own equity instruments, the consideration paid including the direct transaction costs (net of tax expense) are presented as a deduction from total equity until such instruments are retired or reissued. When these instruments are reissued, the consideration received (net of direct transaction costs) is included in the shareholder s equity.

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(20) Financial guarantee contracts

A financial guarantee contract is a contract where the issuer must pay a certain amount of money in order to compensate losses suffered by the creditor when debtor defaults on a debt instrument in accordance with original or modified contractual terms.

A financial guarantee is initially measured at fair value and is subsequently measured at the higher of the amounts below unless it is designated to be measured at FVTPL or when it arises from disposal of an asset.

Loss allowance in accordance with IFRS 9

Initial book value less accumulated profit measured in accordance with IFRS 15

(21) Employee benefits and pensions

The Group recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for the services rendered by the employees. Also, the Group recognizes expenses and liabilities in the case of accumulating compensated absences when the employees render services that entitle their right to future compensated absences. Similarly, the Group recognizes expenses and liabilities for customary profit distribution or bonuses when the employees render services, even though the Group does not have legal obligation to do so because it can be construed as constructive obligation.

The Group is operating defined contribution plans and defined benefit plans. Contributions to defined contribution plans are recognized as an expense when employees have rendered services entitling them to receive the benefits. For defined benefit plans, the defined benefit liability is calculated through an actuarial assessment using the projected unit credit method every end of the reporting period, conducted by a professional actuaries. Remeasurement, comprising actuarial gains and losses, the return on plan assets (excluding interest), and the effect of the changes to the asset ceiling (if applicable) is reflected immediately in the separate statement of financial position with a charge or credit recognized in other comprehensive income in the period in which they occur.

Remeasurement recognized in the consolidated statement of comprehensive income is not reclassified to profit or loss in the subsequent periods. Past service cost is recognized in profit or loss in the period of a plan amendment. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit liability or asset. Defined benefit costs are composed of service cost (including current service cost and past service cost, as well as gains and losses on curtailments and settlements), net interest expense (income) and remeasurement.

The Group presents the service cost and net interest expense (income) components in profit or loss, and the remeasurement component in other comprehensive income. Curtailment gains and losses are accounted for as past service costs.

The retirement benefit obligation recognized in the consolidated statement of financial position represents the actual deficit or surplus in the Group s defined benefit plans. Any surplus resulting from this calculation is recognized as an asset limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

Liabilities for termination benefits are recognized at the earlier of either 1) the date when the Group is no longer able to cancel its proposal for termination benefits or 2) the date when the Group has recognized the cost of restructuring that accompanies the payment of termination benefits.

(22) Income taxes

Income tax expense is composed of current tax and deferred tax. That is, income tax expense is composed of taxes payable or refundable during the period and deferred taxes calculated by applying asset-liability method to taxable and deductible temporary differences arising from operating loss and tax credit carry forwards. Temporary differences are the differences between the carrying values of assets and liabilities for financial reporting purposes and their tax bases. Deferred income tax benefit or expense is recognized for the change in deferred tax assets or liabilities. Deferred tax assets and liabilities are measured as of the reporting date using the enacted or substantively enacted tax rates expected to apply in the period in which the liability is settled or asset realized. Deferred tax assets, including the carry forwards of unused tax losses, are recognized to the extent it is probable that the deferred tax assets will be realized.

Deferred income tax assets and liabilities are offset if, and only if, the Group has a legally enforceable right to offset current tax assets against current tax liabilities, and the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority or when the entity intends to settle current tax liabilities and assets on a net basis with different taxable entities.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred liabilities are not recognized if the temporary difference arises from the initial recognition of goodwill. Deferred tax assets or liabilities are not recognized if they arise from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Current and deferred taxes are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity or when it arises from business combination.

(23) Earnings per share (EPS)

Basic EPS is a calculation of net income per each common stock. It is calculated by dividing net income attributable to ordinary shareholders by the weighted-average number of common shares outstanding. Diluted EPS is calculated by adjusting the earnings and number of shares for the effects of all dilutive potential common shares.

3. SIGNIFICANT ACCOUNTING ESTIMATES AND ASSUMPTIONS

The significant accounting estimates and assumptions are continuously being evaluated based on numerous factors including historical experiences and expectations of future events considered to be reasonably possible. Actual results can differ from those estimates based on such definitions. The accounting estimates and assumptions that contain significant risk of materially changing current book values of assets and liabilities in the next accounting periods are as follows:

(1) Income taxes

The Group has recognized current and deferred taxes based on best estimates of expected future income tax effect arising from the Group s operations until the end of the current reporting period. However, actual tax payment may not be identical to the related assets and/or liabilities already recognized, and these differences may affect current taxes and deferred tax assets/liabilities at the time when income tax effects are finalized. Deferred tax assets relating to tax losses carried forward and deductible temporary differences are recognized only to the extent that it is probable that future taxable profit will be available against which the tax losses carried forward and the deductible temporary differences can be utilized. In this case the Group s evaluation considers various factors such as estimated future taxable profit based on forecasted operating results, which are based on historical financial performance. The Group is reviewing the book value of deferred tax assets every end of the reporting period and in the event that the possibility of earning future taxable income changes, the deferred tax assets are adjusted up to taxable income sufficient to use deductible temporary differences.

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(2) Valuation of Financial Instruments

Financial assets at FVTPL and FVTOCI are recognized in the consolidated financial statements at fair value. All derivatives are measured at fair value. Valuation techniques are required in order to determine fair values of financial instruments where observable market prices do not exist. Financial instruments that are not actively traded and have low price transparency will have less objective fair value and require broad judgment in liquidity, concentration, uncertainty in market factors and assumption in price determination and other risks.

As described in Note 2-(9)-5), Fair value of financial assets and liabilities , when valuation techniques are used to determine the fair value of a financial instrument, various general and internally developed techniques are used, and various types of assumptions and variables are incorporated during the process.

(3) Impairment of financial instruments

IFRS 9 requires entities to measure loss allowance equal to 12-month expected credit losses or lifetime expected credit losses after classifying financial assets into one of the three stages, which depends on the degree of increase in credit risk after their initial recognition.

	Stage 1 **Credit risk has not significantly increased since initial recognition(*)**	**Stage 2** **Credit risk has significantly increased since initial recognition**	**Stage 3** **Credit has been impaired**
Allowance for expected credit losses	Expected 12-month credit losses: Expected credit losses due to possible defaults on financial instruments within a 12-month period from the year-end.	Expected lifetime credit losses: Expected credit losses from all possible defaults during the expected lifetime of the financial instruments.	

(*) Credit risk may be considered to not have been significantly increased when credit risk is low at year-end.

The Group has estimated the allowance for credit losses based on reasonable and supportable information that was available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions.

Probability of default (PD) and Loss given default (LGD) for each category of financial asset is being calculated by considering factors such as debtor type, credit rating and portfolio. The estimates are regularly being reviewed in order to reduce discrepancies with actual losses.

Also, in measuring the expected credit losses, the Group is using reasonable and supportable macroeconomic indicators such as economic growth rates, interest rates, market index rates, etc., in order to forecast future economic conditions.

The Group is conducting the following procedures to estimate and apply future economic forecast information.

Development of prediction models by analyzing the correlation between default rates of corporate and retail exposures per year and macroeconomic indicators

Calculation of predicted default rate incorporating future economic forecasts by applying estimated macroeconomic indicators provided by verified institutions such as Bank of Korea and National Assembly Budget Office to the prediction model developed.

At the end of every reporting period, the Group evaluates whether credit risk reflected forward-looking information has significantly been increased since the date of initial recognition. When evaluating whether credit risk has significantly been increased, the changes in the probability of default over the financial instrument s

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remaining life is used instead of changes in the amount of expected credit losses. The Group performs the above evaluation with distinctions made to corporate and retail exposures, and indicators of significant increase in credit risk are as follows:

Corporate Exposures	Retail Exposures
Asset quality level Precautionary or lower	Asset quality level Precautionary or lower
More than 30 days past due	More than 30 days past due
Warning level in early warning system	Significant decrease in credit rating(*)
Debtor experiencing financial difficulties (Capital impairment, Adverse opinion or Disclaimer of opinion by external auditors)	
Significant decrease in credit rating(*)	

(*) Determining whether there has been a significant decrease in the credit rating of corporate and retail exposures applies only to credit ratings that are measured through 12-month expected credit loss. The Bank has applied the above indicators of significant decrease in credit rating since initial recognition as follows, and the estimation method is regularly being monitored.

	Credit rating	Significant increased indicator of the credit rating
Corporate	AAA ~ A+	More than 4 steps
	A- ~ BBB	More than 3 steps
	BBB- ~ BB+	More than 2 steps
	BB ~ BB-	More than 1 step
Retail	1 ~ 3	More than 3 steps
	4 ~ 5	More than 2 steps
	6 ~ 10	More than 1 step

The Group sees no significant increase in credit risk after initial recognition for debt securities, etc. with a credit rating of A+ or higher, which are deemed to have low credit risk at the end of the reporting period.

The Group concludes that credit is impaired when financial assets are under conditions stated below:

When principal of loan is overdue for 90 days or longer due to significant deterioration in credit

For loans overdue for less than 90 days, when it is determined that not even a portion of the loan will be recovered unless claim actions such as disposal of collaterals are taken

When other objective indicators of impairment has been noted for the financial asset

The Group determines which loan is subject to write-off in accordance with internal guidelines, and writes off loan receivables when it is determined that the loans are practically irrecoverable. For example, loans are practically irrecoverable when application is made for rehabilitation under the Debtor Rehabilitation and Bankruptcy Act and loans are confirmed as irrecoverable by the court s decision to waive debtor s obligation, or when it is impossible to recover the loan amount through legal means such as auctioning of debtor s assets or through any other means of recovery available. Notwithstanding the write-off, the Group may still exercise its right of collection after the asset has been written off in accordance with its collection policies.

(4) Defined benefit plan

The Group operates a defined benefit pension plan. Defined benefit obligation is calculated at every end of the reporting period by performing actuarial valuation, and estimation of assumptions such as discount rate, expected wage growth rate and mortality rate is required to perform such actuarial valuation. The defined benefit plan, due to its long-term nature, contains significant uncertainties in its estimates.

4. RISK MANAGEMENT

The Group s operating activity is exposed to various financial risks. The Group is required to analyze and assess the level of complex risks, and determine the permissible level of risks and manage such risks. The Group s risk management procedures have been established to improve the quality of assets for holding or investment purposes by making decisions as how to avoid or mitigate risks through the identification of the source of the potential risks and their impact.

The Group has established an approach to manage the acceptable level of risks and reduce the excessive risks in financial instruments in order to maximize the profit given risks present, for which the Group has implemented processes for risk identification, assessment, control, and monitoring and reporting.

The risk is managed by the risk management department in accordance with the Group s risk management policy. The Risk Management Committee makes decisions on the risk strategies such as the allocation of risk capital and the establishment of acceptable level of risk.

(1) Credit risk

Credit risk represents the possibility of financial losses incurred when the counterparty fails to fulfill its contractual obligations. The goal of credit risk management is to maintain the Group s credit risk exposure to a permissible degree and to optimize its rate of return considering such credit risk.

1) Credit risk management

The Group considers the probability of failure in performing the obligation of its counterparties, credit exposure to the counterparty, the related default risk and the rate of default loss. The Group uses the credit rating model to assess the possibility of counterparty s default risk; and when assessing the obligor s credit grade, the Group utilizes credit grades derived using statistical methods.

In order to manage credit risk limit, the Group establishes the appropriate credit line per obligor, company or industry. It monitors obligor s credit line, total exposures and loan portfolios when approving the loan.

The Group mitigates credit risk resulting from the obligor s credit condition by using financial and physical collateral, guarantees, netting agreements and credit derivatives. The Group has adopted the entrapment method to mitigate its credit risk. Credit risk mitigation is reflected in qualifying financial collateral, trade receivables, guarantees, residential and commercial real estate and other collaterals. The Group regularly performs a revaluation of collateral reflecting such credit risk mitigation.

2) Maximum exposure to credit risk

The Group s maximum exposure to credit risk refers to net book value of financial assets net of allowances, which shows the uncertainties of maximum changes of net value of financial assets attributable to a particular risk without considering collateral and other credit enhancements obtained. However, the maximum exposure is the fair value amount (recorded on the books) for derivatives, maximum contractual obligation for payment guarantees and unused loan commitment.

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The maximum exposure to credit risk is as follows (Unit: Korean Won in millions):

		December 31, 2017	December 31, 2018
Loans and other financial assets at amortized cost	Korean treasury and government agencies		13,547,154
	Banks		22,283,842
	Corporates		96,627,671
	Consumers		149,998,911
	Sub-total		282,457,578
Loans and receivables	Korean treasury and government agencies	8,823,584	
	Banks	26,845,309	
	Corporates	90,570,551	
	Consumers	140,866,760	
	Sub-total	267,106,204	
Financial assets at FVTPL (IFRS 9)	Deposit		26,935
	Debt securities		1,824,155
	Loans		385,450
	Derivative assets		2,026,079
	Sub-total		4,262,619
Financial assets at FVTPL (IAS 39)	Deposit	25,972	
	Debt securities	2,644,333	
	Financial assets designated as at FVTPL	9,694	
	Derivative assets	3,115,775	
	Sub-total	5,795,774	
Financial assets at FVTOCI	Debt securities		17,112,249
AFS financial assets	Debt securities	13,229,244	
Securities at amortized cost	Debt securities		22,932,559
HTM financial assets	Debt securities	16,749,296	
Derivative assets	Derivative assets (Designated for hedging)	59,272	35,503
Off-balance accounts	Guarantees	12,859,715	12,666,417
	Unused loan commitments	80,760,325	97,796,704
	Sub-total	93,620,040	110,463,121
	Total	396,559,830	437,263,629

a) Credit risk exposure by geographical areas

The following tables analyze credit risk exposure by geographical areas (Unit: Korean Won in millions):

	December 31, 2017						
	Korea	China	USA	UK	Japan	Others (*)	Total
Loans and receivables	250,678,479	4,104,912	2,823,247	1,094,988	381,890	8,022,688	267,106,204
Financial assets at FVTPL	5,551,870	2,937		148,955		92,012	5,795,774
AFS debt securities	12,407,602	52,259	151,131			618,252	13,229,244
HTM securities	16,606,692		63,732			78,872	16,749,296
Derivative assets (Designated for hedging)	16,590			42,682			59,272
Off-balance accounts	91,603,852	529,193	172,570	66,974	25,039	1,222,412	93,620,040
Total	376,865,085	4,689,301	3,210,680	1,353,599	406,929	10,034,236	396,559,830

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	December 31, 2018						
	Korea	China	USA	UK	Japan	Others(*)	Total
Loans and other financial assets at amortized cost	261,547,407	4,592,153	4,597,119	1,526,532	893,354	9,301,013	282,457,578
Securities at amortized cost	22,757,048		70,578			104,933	22,932,559
Financial assets at FVTPL	4,261,110	1,243			266		4,262,619
Financial assets at FVTOCI	15,697,518	261,085	103,755	24,960	2,247	1,022,684	17,112,249
Derivative assets (Designated for hedging)	35,503						35,503
Off-balance accounts	107,632,858	801,978	343,323	136,727	35,000	1,513,235	110,463,121
Total	411,931,444	5,656,459	5,114,775	1,688,219	930,867	11,941,865	437,263,629

(*) Others consist of financial assets in Indonesia, Hong Kong, Singapore, and other countries.

b) Credit risk exposure by industries

The following tables analyze credit risk exposure by industries, which are service, manufacturing, finance and insurance, construction, individuals and others in accordance with the Korea Standard Industrial Classification Code (Unit: Korean Won in millions):

	December 31, 2017						
	Service	Manufacturing	Finance and insurance	Construction	Individuals	Others	Total
Loans and receivables	47,192,641	34,502,509	38,260,051	3,574,746	133,094,287	10,481,970	267,106,204
Financial assets at FVTPL	100,766	83,239	4,640,068	15,073	1,040	955,588	5,795,774
AFS debt securities	707,737	37,719	7,331,774	153,534		4,998,480	13,229,244
HTM securities	1,348,754		10,962,149	296,214		4,142,179	16,749,296
Derivative assets (Designated for hedging)			59,272				59,272
Off-balance accounts	16,892,926	21,427,378	9,841,379	3,842,479	36,928,554	4,687,324	93,620,040
Total	66,242,824	56,050,845	71,094,693	7,882,046	170,023,881	25,265,541	396,559,830

	December 31, 2018						
	Service	Manufacturing	Finance and insurance	Construction	Individuals	Others	Total
Loans and other financial assets at amortized cost	48,319,987	34,972,072	40,338,823	3,295,967	145,715,074	9,815,655	282,457,578
Securities at amortized cost	1,157,512		13,414,743	527,847		7,832,457	22,932,559
Financial assets at FVTPL	120,659	153,159	3,117,845	16,118	7,614	847,224	4,262,619
Financial assets at FVTOCI	382,409	109,749	13,017,646	224,665	5,535	3,372,245	17,112,249
Derivative assets (Designated for hedging)			35,503				35,503
Off-balance accounts	17,645,104	22,300,388	9,654,685	4,146,708	49,948,865	6,767,371	110,463,121
Total	67,625,671	57,535,368	79,579,245	8,211,305	195,677,088	28,634,952	437,263,629

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3) Credit risk exposure

a) Financial assets

The maximum exposure to credit risk by asset quality, except for financial assets at FVTPL and derivative asset (Designated for hedging), is as follows (Unit: Korean Won in millions):

Loans and receivables

	December 31, 2017							
			Corporates					
	Korean treasury and government agencies	Banks	General business	Small- and medium-sized enterprise	Project financing and others	Sub-total	Consumers	Total
Neither overdue nor impaired	8,825,767	26,861,286	50,463,112	34,107,547	5,547,950	90,118,609	139,886,407	265,692,069
Overdue but not impaired	8		65,616	63,067		128,683	878,406	1,007,097
Impaired			1,402,131	251,431	46,717	1,700,279	537,001	2,237,280
Total	8,825,775	26,861,286	51,930,859	34,422,045	5,594,667	91,947,571	141,301,814	268,936,446
Loss allowance	2,191	15,977	1,078,733	267,162	31,125	1,377,020	435,054	1,830,242
Total, net	8,823,584	26,845,309	50,852,126	34,154,883	5,563,542	90,570,551	140,866,760	267,106,204

Debt securities

The Group manages debt securities based on the external credit rating. Credit soundness of debt securities on the basis of External Credit Assessment Institution (ECAI) s rating is as follows (Unit: Korean Won in millions):

	December 31, 2017			
	Financial assets at FVTPL(*)	AFS debt securities	HTM securities	Total
AAA	1,685,099	9,897,689	15,806,327	27,389,115
AA- ~ AA+	722,923	2,386,567	888,547	3,998,037
BBB- ~ A+	236,311	876,482	52,188	1,164,981

Below BBB-	9,694	68,506	2,234	80,434
Total	2,654,027	13,229,244	16,749,296	32,632,567

(*) Financial assets at FVTPL comprise debt securities held for trading and financial assets designated as at FVTPL.

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	December 31, 2018							
	Stage 1		Stage 2					
	Above appropriate credit rating(*1)	Less than a limited credit rating(*3)	Above appropriate credit rating(*2)	Less than a limited credit rating(*3)	Stage 3	Total	Loss allowance	Total, net
Loans and other financial assets at amortized cost	252,921,186	17,624,416	6,330,382	5,739,850	1,693,148	284,308,982	(1,851,404)	282,457,578
Korean treasury and government agencies	13,549,305	1,009	1			13,550,315	(3,161)	13,547,154
Banks	22,163,951	105,583	27,777		14,307	22,311,618	(27,776)	22,283,842
Corporates	77,160,502	15,550,301	655,907	3,424,215	1,034,030	97,824,955	(1,197,284)	96,627,671
General business	43,173,952	6,474,057	526,303	1,723,704	716,722	52,614,738	(817,002)	51,797,736
Small- and medium-sized enterprise	29,510,917	8,527,542	107,998	1,547,761	277,825	39,972,043	(335,469)	39,636,574
Project financing and others	4,475,633	548,702	21,606	152,750	39,483	5,238,174	(44,813)	5,193,361
Consumers	140,047,428	1,967,523	5,646,697	2,315,635	644,811	150,622,094	(623,183)	149,998,911
Securities at amortized cost	22,939,039		195		250	22,939,484	(6,925)	22,932,559
Financial assets at FVTOCI(*4)	16,940,654	146,442	25,153			17,112,249	(6,177)	17,112,249
Total	292,800,879	17,770,858	6,355,730	5,739,850	1,693,398	324,360,715	(1,864,506)	322,502,386

	December 31, 2018			
	Collateral value			
	Stage 1	Stage 2	Stage 3	Total
Loans and other financial assets at amortized cost	163,329,105	8,836,440	698,593	172,864,138
Korean treasury and government agencies	11,600			11,600
Banks	361,024	3,334		364,358
Corporates	51,595,949	2,509,620	426,325	54,531,894
General business	19,907,948	1,167,993	241,651	21,317,592
Small- and medium-sized enterprise	29,780,716	1,291,222	184,674	31,256,612
Project financing and others	1,907,285	50,405		1,957,690

Consumers	111,360,532	6,323,486	272,268	117,956,286
Securities at amortized cost				
Financial assets at FVTOCI(*4)				
Total	163,329,105	8,836,440	698,593	172,864,138

(*1) Credit grade of corporates are AAA ~ BBB, and consumers are grades 1 ~ 6.
(*2) Credit grade of corporates are A- ~ BBB, and consumers are grades 1 ~ 6.
(*3) Credit grade of corporates are BBB- ~ C, and consumers are grades 7 ~ 10.
(*4) Financial assets at FVTOCI has been disclosed as the amount before deducting loss allowance because loss allowance does not reduce the carrying amount.

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b) Guarantees and loan commitments

The credit quality of the guarantees and loan commitments as of December 31, 2018 as follows (Unit: Korean Won in millions):

	December 31, 2018					
	Stage 1		Stage 2			
Financial assets	Above appropriate credit rating(*1)	Less than a limited credit rating(*3)	Above appropriate credit rating(*2)	Less than a limited credit rating(*3)	Stage 3	Total
Off-balance accounts Guarantees	11,212,772	1,063,551	7,147	261,599	121,348	12,666,417
Loan commitments	91,734,567	3,632,586	1,529,330	880,518	19,703	97,796,704
Total	102,947,339	4,696,137	1,536,477	1,142,117	141,051	110,463,121

(*1) Credit grade of corporates are AAA ~ BBB, and consumers are grades 1 ~ 6.
(*2) Credit grade of corporates are A- ~ BBB, and consumers are grades 1 ~ 6.
(*3) Credit grade of corporate are BBB- ~ C, and consumers are grades 7 ~ 10.

4) Collateral and other credit enhancements

During the current quarter, there have been no significant changes in the value of collateral or other credit enhancements held by the Group and there have been no significant changes in collateral or other credit enhancements due to changes in the collateral policy of the Group. As of December 31, 2018, there are no financial assets that do not recognize the allowance for losses just because financial assets have collateral.

5) For the financial assets that record loss allowance as total expected credit loss, the amortized cost before the change in contractual cash flows is 23,132 million won, and the net loss due to the change is 239 million won.

6) As the Group manages receivables that have not lost the right of claim to the debtor for the grounds of incomplete statute limitation and uncollected receivables under the related laws as receivable charge-offs, the balance as of December 31, 2018 is 9,578,796 million won.

(2) Market risk

Market risk is the possible risk of loss arising from trading activities and non-trading activities in the volatility of market factors such as interest rates, stock prices and foreign exchange rates. Market risk occurs as a result of changes in the interest rates and foreign exchange rates for financial instruments that are not yet settled, and all contracts are exposed to a certain level of volatility according to changes in the interest rates, credit spreads, foreign exchange rates and the price of equity securities.

1) Market risk management

For trading activities and non-trading activities, the Group avoids, bears, or mitigates risks by identifying the underlying source of the risks, measuring parameters and evaluating their appropriateness.

On a yearly basis, the Risk Management Committee establishes a Value at Risk (VaR , maximum losses) limit, loss limit and risk capital limit by subsidiaries for its management purposes. The limit by investment desk/dealer is independently managed to the extent of the limit given to subsidiaries and the limit by investment and loss cut is managed by the risk management personnel within the department.

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The Group uses both a standard-based and an internal model-based approach to measure market risk. The standard-based approach is used to calculate individual market risk of owned capital while the internal model-based approach is used to calculate general capital market risk and it is used to measure internal risk management measure. For the trading activities, the Risk Management department measures the VaR limit by department, risk factor and loss limit on a daily basis and reports regularly to the Risk Management Committee.

2) Sensitivity analysis of market risk

The Group performs the sensitivity analysis both for trading and for non-trading activities.

For trading activities, the Group uses a VaR model that uses certain assumptions of possible fluctuations in market condition and, by conducting simulations of gains and losses, under which the model estimates the maximum losses that may occur. A VaR model predicts based on statistics of possible losses on the portfolio at a certain period currently or in the future. It indicates the maximum expected loss with at least 99% confidence level. In short, there exists a one percent possibility that the actual loss might exceed the predicted loss generated from the VaR calculation. The actual results are periodically monitored to examine the validity of the assumptions, variables, and factors that are used in VaR calculations. However, this approach cannot prevent the loss when the market fluctuation exceeds expectation.

For the non-trading activities, interest rate Earning at Risk (EaR) and interest rate VaR, which is based on the simulations of the Net Interest Income (NII) and Net Portfolio Value (NPV), are calculated for the Bank and the consolidated trusts, and the risks for all other subsidiaries are measured and managed by the interest rate EaR and the interest rate VaR calculations based on the Bank for International Settlements (BIS) Framework.

NII is a profit-based indicator for displaying the profit changes in short term due to the short-term interest changes. It will be estimated as subtracting interest expenses of liabilities from the interest income of assets. NPV is an indicator for displaying risks in economic view according to unfavorable changes related to interest rate. It will be estimated as subtracting the present value of liabilities from the present value of assets. EaR shows the maximum profit-loss amount, which indicates the maximum deduction amount caused by the unfavorable changes related to the interest rate of a certain period (i.e. 1 year). Interest rate VaR shows the potential maximum loss generated by the unfavorable changes during a certain period of time in the present or future.

a) Trading activities

The minimum, maximum and average VaR for the year ended December 31, 2017 and 2018, respectively, and the VaR as of December 31, 2017 and 2018, respectively, are as follows (Unit: Korean Won in millions):

Risk factor	December 31, 2017	For the year ended December 31, 2017 Average	Maximum	Minimum	December 31, 2018	For the year ended December 31, 2018 Average	Maximum	Minimum
Interest rate	4,183	3,799	4,918	2,467	3,107	3,702	5,528	1,730
Stock price	909	2,863	4,419	909	2,353	2,669	5,081	1,138
Foreign currencies	4,750	5,051	6,636	4,061	4,972	4,678	6,136	3,439
Commodity price		31	188			3	24	
Diversification	(4,472)	(4,621)	(6,798)	(2,067)	(4,445)	(4,869)	(8,155)	(1,815)

Total VaR(*)	5,370	7,123	9,363	5,370	5,987	6,183	8,614	4,492

(*) VaR (Value at Risk): Maximum expected losses

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b) Non-trading activities

The NII and NPV are calculated for the assets and liabilities owned by the Bank and consolidated trusts, respectively, by using the simulation method. The scenario responding to interest rate (IR) changes are as follows (Unit: Korean Won in millions):

	December 31, 2017		December 31, 2018	
	NII(*1)	NPV(*2)	NII(*1)	NPV(*2)
Base case	4,916,138	23,472,792	4,895,332	24,636,678
Base case (Prepay)	4,916,015	23,163,942	4,887,799	24,225,946
IR 100bp up	5,361,546	22,886,122	5,575,470	24,415,761
IR 100bp down	4,386,437	24,127,559	4,329,543	24,907,344
IR 200bp up	5,806,723	22,372,208	6,603,132	24,232,738
IR 200bp down	3,452,590	24,830,482	3,508,859	25,245,667
IR 300bp up	6,251,897	21,929,189	7,560,155	24,079,415
IR 300bp down	2,254,609	26,633,807	3,352,267	25,680,084

(*1) NII: Net Interest Income
(*2) NPV: Net Portfolio Value
The interest EaR and VaR calculated based on the BIS Framework of subsidiaries other than the Bank and consolidated trusts are as follows (Unit: Korean Won in millions):

December 31, 2017		December 31, 2018	
EaR(*1)	VaR(*2)	EaR(*1)	VaR(*2)
255,679	130,821	248,364	141,484

(*1) EaR(Earning at Risk): Change of Maximum expected income and expense
(*2) VaR(Value at Risk): Maximum expected losses
The Group estimates and manages risks related to changes in interest rate due to the difference in the maturities of interest-bearing assets and liabilities and discrepancies in the terms of interest rates. Cash flows (both principal and interest), interest bearing assets and liabilities, presented by each re-pricing date, are as follows (Unit: Korean Won in millions):

	December 31, 2017						
	Within 3 months	4 to 6 months	7 to 9 months	10 to 12 months	1 to 5 years	Over 5 years	Total
Asset:							
Loans and receivables	161,653,892	41,671,530	7,614,159	6,411,841	54,150,998	26,272,958	297,775,378
	2,150,708	2,500,103	2,016,711	2,367,762	4,229,000	601,735	13,866,019

AFS financial assets							
HTM financial assets	2,286,179	2,161,467	1,433,425	1,687,362	9,369,794	345,868	17,284,095
Total	166,090,779	46,333,100	11,064,295	10,466,965	67,749,792	27,220,561	328,925,492
Liability:							
Deposits due to customers	106,815,564	37,750,367	25,117,556	27,585,458	37,518,878	91,246	234,879,069
Borrowings	9,865,249	1,056,579	412,966	437,431	2,709,010	479,827	14,961,062
Debentures	1,955,902	2,452,240	1,018,563	1,752,847	19,770,538	2,869,766	29,819,856
Total	118,636,715	41,259,186	26,549,085	29,775,736	59,998,426	3,440,839	279,659,987

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	December 31, 2018						
	Within 3 months	4 to 6 months	7 to 9 months	10 to 12 months	1 to 5 years	Over 5 years	Total
Asset:							
Loans and other financial assets at amortized cost	159,894,065	45,387,214	8,878,060	9,903,959	46,459,450	4,201,379	274,724,127
Financial assets at FVTPL	371,984	32,278	24,951	64,838	145,121	27,536	666,708
Financial assets at FVTOCI	2,579,442	1,775,435	1,486,953	2,223,494	9,289,742	185,320	17,540,386
Securities at amortized cost	2,449,416	2,251,180	1,735,698	1,946,948	15,177,608	402,671	23,963,521
Total	165,294,907	49,446,107	12,125,662	14,139,239	71,071,921	4,816,906	316,894,742
Liability:							
Deposits due to customers	100,232,916	44,207,416	29,419,951	35,427,657	40,130,055	72,276	249,490,271
Borrowings	9,971,680	1,924,390	670,404	518,167	2,723,156	626,364	16,434,161
Debentures	2,153,916	2,416,483	2,201,070	2,584,230	18,955,400	2,403,077	30,714,176
Total	112,358,512	48,548,289	32,291,425	38,530,054	61,808,611	3,101,717	296,638,608

3) Currency risk

Currency risk arises from the financial instruments denominated in foreign currencies other than the functional currency. Therefore, no currency risk arises from non-monetary items or financial instruments denominated in the functional currency.

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Financial instruments in foreign currencies exposed to currency risk are as follows (Unit: USD in millions, JPY in millions, CNY in millions, EUR in millions, and Korean Won in millions):

	December 31, 2017									
	USD		JPY		CNY		EUR		Others	Total
	Foreign currency	Korean Won equivalent	Foreign currency	Korean Won equivalent	Foreign currency	Korean Won equivalent	Foreign currency	Korean Won equivalent	Korean Won equivalent	Korean Won equivalent
Asset										
Loans and receivables	23,000	24,642,900	126,944	1,204,843	25,224	4,127,936	1,156	1,479,351	3,937,733	35,392,763
Financial assets at FVTPL	32	34,303	25	238			27	34,583	104,892	174,016
AFS financial assets	1,966	2,105,972			319	52,259		590	302,801	2,461,622
HTM financial assets	111	118,868							78,175	197,043
Total	25,109	26,902,043	126,969	1,205,081	25,543	4,180,195	1,183	1,514,524	4,423,601	38,225,444
Liability										
Financial liabilities at FVTPL	41	43,423	79	752			19	24,878	69,977	139,030
Deposits due to customers	13,744	14,725,686	195,176	1,852,440	21,865	3,578,142	883	1,129,802	2,396,826	23,682,896
Borrowings	6,604	7,080,118	2,218	21,056			247	315,685	242,874	7,659,733
Debentures	3,467	3,714,411			700	114,555			375,749	4,204,715
Other financial liabilities	2,392	2,562,740	16,125	153,043	1,802	294,950	129	165,189	588,625	3,764,547
Total	26,248	28,126,378	213,598	2,027,291	24,367	3,987,647	1,278	1,635,554	3,674,051	39,450,921
Off-balance accounts	8,108	8,687,009	33,624	319,127	1,199	196,261	406	519,843	176,886	9,899,126

	December 31, 2018									
	USD		JPY		CNY		EUR		Others	Total
	Foreign currency	Korean Won	Foreign currency	Korean Won	Foreign currency	Korean Won	Foreign currency	Korean Won	Korean Won	Korean Won

		equivalent		equivalent		equivalent		equivalent	equivalent	equivalent
Asset										
Loans and other financial assets at amortized cost	20,406	22,816,027	167,419	1,696,255	29,880	4,863,230	1,994	2,550,147	4,742,340	36,667,999
Financial assets at FVTPL	74	82,197	1,425	14,434			59	75,169	79,584	251,384
Financial assets at FVTOCI	1,472	1,645,595			1,604	261,085			729,581	2,636,261
Securities at amortized cost	52	58,489							175,552	234,041
Total	22,004	24,602,308	168,844	1,710,689	31,484	5,124,315	2,053	2,625,316	5,727,057	39,789,685
Liability										
Financial liabilities at FVTPL	118	131,927	1,956	19,815			55	70,250	121,658	343,650
Deposits due to customers	11,159	12,477,154	169,770	1,720,072	23,967	3,900,923	887	1,135,149	4,392,936	23,626,234
Borrowings	6,606	7,386,616	3,834	38,847	381	61,947	286	365,585	505,541	8,358,536
Debentures	3,645	4,075,084							285,339	4,360,423
Other financial liabilities	2,522	2,820,290	28,955	293,362	1,818	295,919	193	246,584	18,527	3,674,682
Total	24,050	26,891,071	204,515	2,072,096	26,166	4,258,789	1,421	1,817,568	5,324,001	40,363,525
Off-balance accounts	7,453	8,333,153	33,347	337,868	1,557	253,366	474	606,714	823,655	10,354,756

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(3) Liquidity risk

Liquidity risk refers to the risk that the Group may encounter difficulties in meeting obligations from its financial liabilities.

1) Liquidity risk management

Liquidity risk management is to prevent potential cash shortages as a result of mismatching the use of funds (assets) and sources of funds (liabilities) or unexpected cash outflows. The financial liabilities that are relevant to liquidity risk are incorporated within the scope of risk management. Derivatives instruments are excluded from those financial liabilities as they reflect expected cash flows for a pre-determined period.

Assets and liabilities are grouped by account under Asset Liability Management (ALM) in accordance with the characteristics of the account. The Group manages liquidity risk by identifying the maturity gap and such gap ratio through various cash flows analysis (i.e. based on remaining maturity and contract period, etc.), while maintaining the gap ratio at or below the target limit.

2) Maturity analysis of non-derivative financial liabilities

a) Cash flows of principals and interests by remaining contractual maturities of non-derivative financial liabilities are as follows (Unit: Korean Won in millions):

	December 31, 2017						
	Within 3 months	**4 to 6 months**	**7 to 9 months**	**10 to 12 months**	**1 to 5 years**	**Over 5 years**	**Total**
Financial liabilities at FVTPL	168,442	155,984	1,717	512	375		327,030
Deposits due to customers	148,008,777	29,563,310	18,175,348	32,468,110	7,409,118	2,624,594	238,249,257
Borrowings	6,115,732	1,893,173	1,489,272	1,178,107	3,924,681	479,568	15,080,533
Debentures	1,955,255	2,452,565	1,018,714	1,744,731	19,770,380	2,869,699	29,811,344
Other financial liabilities	7,121,342	162,871	825	1,003	128,940	2,730,001	10,144,982
Total	163,369,548	34,227,903	20,685,876	35,392,463	31,233,494	8,703,862	293,613,146

	December 31, 2018						
	Within 3 months	**4 to 6 months**	**7 to 9 months**	**10 to 12 months**	**1 to 5 years**	**Over 5 years**	**Total**
Financial liabilities at FVTPL	191,825						191,825

Deposits due to customers	145,187,689	33,825,662	22,186,833	42,046,740	7,098,907	1,870,334	252,216,165
Borrowings	6,373,835	2,846,294	1,874,069	1,607,985	3,156,128	642,017	16,500,328
Debentures	2,153,916	2,416,483	2,201,070	2,584,230	18,955,400	2,403,077	30,714,176
Other financial liabilities	14,240,022	44,572	169,996	1,201	90,615	2,288,560	16,834,966
Total	168,147,287	39,133,011	26,431,968	46,240,156	29,301,050	7,203,988	316,457,460

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b) Cash flows of principals and interests by expected maturities of non-derivative financial liabilities are as follows (Unit: Korean Won in millions):

	December 31, 2017						
	Within 3 months	4 to 6 months	7 to 9 months	10 to 12 months	1 to 5 years	Over 5 years	Total
Financial liabilities at FVTPL	168,442	155,984	1,717	512	375		327,030
Deposits due to customers	159,146,602	31,298,562	16,667,130	21,995,294	6,487,047	2,278,756	237,873,391
Borrowings	6,115,732	1,893,173	1,489,272	1,178,107	3,924,681	479,568	15,080,533
Debentures	1,955,255	2,452,565	1,018,714	1,744,731	19,770,380	2,869,699	29,811,344
Other financial liabilities	7,121,342	162,871	825	1,003	128,940	2,730,001	10,144,982
Total	174,507,373	35,963,155	19,177,658	24,919,647	30,311,423	8,358,024	293,237,280

	December 31, 2018						
	Within 3 months	4 to 6 months	7 to 9 months	10 to 12 months	1 to 5 years	Over 5 years	Total
Financial liabilities at FVTPL	191,825						191,825
Deposits due to customers	163,787,990	38,126,886	20,993,436	23,262,092	5,230,533	17,649	251,418,586
Borrowings	6,373,835	2,846,294	1,874,069	1,607,985	3,156,128	642,017	16,500,328
Debentures	2,153,916	2,416,483	2,201,070	2,584,230	18,955,400	2,403,077	30,714,176
Other financial liabilities	14,240,022	44,572	169,996	1,201	90,615	2,288,560	16,834,966
Total	186,747,588	43,434,235	25,238,571	27,455,508	27,432,676	5,351,303	315,659,881

3) Maturity analysis of derivative financial liabilities

Derivatives held for trading purpose are not managed in accordance with their contractual maturity, since the Group holds such financial instruments with the purpose of disposing or redemption before their maturity. As such, those derivatives are incorporated as within 3 months in the table below. Derivatives designated for hedging purpose are estimated by offsetting cash inflows and cash outflows.

The cash flow by the maturity of derivative financial liabilities as of December 31, 2017 and 2018 is as follows (Unit: Korean Won in millions):

	Remaining maturity						
	Within 3 months	**4 to 6 months**	**7 to 9 months**	**10 to 12 months**	**1 to 5 years**	**Over 5 years**	**Total**
December 31, 2017	3,150,149			381	67,373		3,217,903
December 31, 2018	2,090,861	816			50,592		2,142,269

4) Maturity analysis of off-balance accounts (Guarantees and loan commitments)

The Group provides guarantees on behalf of customers. A financial guarantee represents an irrevocable undertaking that the Group should meet a customer s obligations to third parties if the customer fails to do so. Under a loan commitment, the Group agrees to make funds available to a customer in the future. Commitments to lend include commercial standby facilities and credit lines, liquidity facilities to commercial paper conduits and utilized overdraft facilities. The maximum limit to be paid by the Group in accordance with guarantees and loan commitment only applies to principal amounts. There are contractual maturities for financial guarantees, such as guarantees for debentures issued or loans, unused loan commitments, and other guarantees, however, under the terms of the guarantees and unused loan commitments, funds should be paid upon demand from the counterparty. Details of off-balance accounts are as follows (Unit: Korean Won in millions):

	December 31, 2017	December 31, 2018
Guarantees	12,859,715	12,666,417
Loan commitments	80,760,325	97,796,704

(4) Operational risk

The Group defines the operational risk that could cause a negative effect on capital resulting from inadequate internal process, labor work and systematic problem or external factors.

1) Operational risk management

The Group has been running the operational risk management system under Basel II. The Group developed Advanced Measurement Approaches (AMA) to quantify required capital for operational risk. This system is used for reinforcement in foreign competitions, reducing the amount of risk capitals, managing the risk, and precaution for any unexpected occasions. This system has been tested by an independent third party, and this system approved by the Financial Supervisory Service.

2) Operational risk measurement

To quantify required capital for operational risk, the Group applies AMA using internal and external loss data, business environment and internal control factors, and scenario analysis. For the operational risk management for its subsidiaries, the Group adopted the Basic Indicator Approach.

(5) Capital management

The Group complies with the standard of capital adequacy provided by financial regulatory authorities. The capital adequacy standard is based on Basel published by Basel III Committee on Banking Supervision in Bank for International Settlement in 2010 and was implemented in Korea in December 2013. The capital adequacy ratio is calculated by dividing own capital by asset (weighted with a risk premium risk weighted assets) based on the consolidated financial statements of the Group.

According to the above regulations, the Group is required to meet the following new minimum requirements: Common Equity Tier 1 capital ratio of 6.25% and 7.13%, a Tier 1 capital ratio of 7.75% and 8.63% and a minimum total capital ratio of 9.75% and 10.63% as of December 31, 2017 and 2018, respectively.

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Details of the Group s capital adequacy ratio as of December 31, 2017 and 2018 are as follows (Unit: Korean Won in millions):

	December 31, 2017	December 31, 2018
Tier 1 capital	16,074,987	17,275,539
Other Tier 1 capital	3,041,664	3,147,680
Tier 2 capital	3,486,555	3,827,573
Total risk-adjusted capital	22,603,206	24,250,792
Risk-weighted assets for credit risk	134,767,711	142,626,069
Risk-weighted assets for market risk	2,316,938	2,372,451
Risk-weighted assets for operational risk	9,677,559	9,972,430
Total risk-weighted assets	146,762,208	154,970,950
Common Equity Tier 1 ratio	10.95%	11.15%
Tier 1 capital ratio	13.03%	13.18%
Total capital ratio	15.40%	15.65%

5. OPERATING SEGMENTS

In evaluating the results of the Group and allocating resources, the Group s Chief Operation Decision Maker (CODM) utilizes the information per type of customers. This financial information of the segments is regularly reviewed by the CODM to make decisions about resources to be allocated to each segment and evaluate its performance.

(1) Segment by type of customers

The Group s reporting segments comprise the following customers: consumer banking, corporate banking, investment banking, capital market, credit card market and headquarters and others. The reportable segments are classified based on the target customers for whom the service is being provided.

Consumer banking: Loans/deposits and financial services for retail and individual consumers, etc.

Corporate banking: Loans/deposits and export/import, financial services for corporations, etc.

Investment banking: Domestic/foreign investment, structured finance, M&A, equity & fund investment related business, venture advisory related tasks, real estate SOC development practices, etc.

Capital market: Fund management, investment in securities and derivatives, etc.

Credit card: Credit card, cash service and card loan, etc.

Headquarter and others: Segments that do not belong to above operating segments

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The details of operating income by each segment are as follows (Unit: Korean Won in millions):

	For the year ended December 31, 2016								
	Consumer banking	Corporate banking	Investment banking	Capital market	Credit Cards	Headquarter and Others	Sub-total	Adjust- ments(*)	Tota
nterest ne									
st income	2,979,811	3,026,148	153,160	19,575	556,682	1,492,147	8,227,523	284,789	8,512,
st expense	(1,023,290)	(1,780,990)	(225)	(324)	(128,586)	(863,523)	(3,796,938)	304,170	(3,492,
segment	(472,288)	495,982	(138,322)	29,575		85,053			
	1,484,233	1,741,140	14,613	48,826	428,096	713,677	4,430,585	588,959	5,019,
on-interest ne (expense)									
nterest ne	923,810	535,514	605,026	7,590,087	986,148	4,563,280	15,203,865	(13,039,498)	2,164,
nterest se	(405,912)	(32,873)	(444,141)	(7,586,054)	(906,434)	(4,173,415)	(13,548,829)	12,251,676	(1,297,
segment	39,512	47,553				(87,065)			
	557,410	550,194	160,885	4,033	79,714	302,800	1,655,036	(787,822)	867,
ne(expense)									
ral and nistrative se	(1,788,672)	(966,878)	(14,983)	(17,964)	(148,001)	(793,978)	(3,730,476)	252,000	(3,478,
rsal of ance for loss and rment s due to loss	(86,907)	(509,312)	(95,880)	(34,031)	(216,136)	219,372	(722,894)	(111,182)	(834,
	(1,875,579)	(1,476,190)	(110,863)	(51,995)	(364,137)	(574,606)	(4,453,370)	140,818	(4,312,
ting ne	166,064	815,144	64,635	864	143,673	441,871	1,632,251	(58,045)	1,574,
operating ne (expense)	(35,081)	(1,619)	46,559	(5,288)	(1,504)	55,291	58,358	(79,175)	(20,
ncome e income xpense	130,983	813,525	111,194	(4,424)	142,169	497,162	1,690,609	(137,220)	1,553,
	(31,698)	(203,983)	(26,909)	1,071	(32,774)	16,476	(277,817)	1,961	(275,

ne tax se									
ne(expense)	99,285	609,542	84,285	(3,353)	109,395	513,638	1,412,792	(135,259)	1,277,

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	For the year ended December 31, 2017								
	Consumer banking	Corporate banking	Investment banking	Capital market	Credit cards	Headquarters and others	Sub-total	Adjust- ments(*)	Tot
terest e									
t income	3,149,625	2,964,813	148,500	18,834	599,550	1,360,734	8,242,056	308,631	8,550
t expense	(955,836)	(1,681,652)	(243)		(135,947)	(834,662)	(3,608,340)	278,303	(3,330
egment	(490,850)	512,216	(136,133)	18,049		96,718			
	1,702,939	1,795,377	12,124	36,883	463,603	622,790	4,633,716	586,934	5,220
n-interest e (expense)									
nterest e	802,387	680,778	366,523	9,548,399	1,163,575	2,683,407	15,245,069	(12,858,172)	2,386
nterest se	(253,961)	(170,268)	(214,355)	(9,478,728)	(1,090,038)	(2,132,053)	(13,339,403)	12,204,532	(1,134
egment	101,524	60,826				(162,350)			
	649,950	571,336	152,168	69,671	73,537	389,004	1,905,666	(653,640)	1,252
income se)									
al and istrative se	(1,808,974)	(832,429)	(12,881)	(16,567)	(163,536)	(954,238)	(3,788,625)	257,824	(3,530
sal of nce for loss and ment due to loss	(97,587)	(316,859)	(50,954)	31,229	(235,116)	14,832	(654,455)	(130,678)	(785
	(1,906,561)	(1,149,288)	(63,835)	14,662	(398,652)	(939,406)	(4,443,080)	127,146	(4,315
ting e	446,328	1,217,425	100,457	121,216	138,488	72,388	2,096,302	60,440	2,156
perating e (expense)	(98,510)	(3,153)	39,350		(5,219)	(112,734)	(180,266)	(26,970)	(207
come income pense	347,818	1,214,272	139,807	121,216	133,269	(40,346)	1,916,036	33,470	1,949
e tax se	(84,172)	(296,634)	(33,834)	(29,335)	(32,055)	63,396	(412,634)	(6,784)	(419
e(expense)	263,646	917,638	105,973	91,881	101,214	23,050	1,503,402	26,686	1,530

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	For the year ended December 31, 2018								
	Consumer banking	**Corporate banking**	**Investment banking**	**Capital market**	**Credit cards**	**Headquarters and others**	**Sub-total**	**Adjust-ments(*)**	**Total**
nterest me (expense)									
est income	3,529,645	3,409,835	152,273	8,945	670,240	1,605,696	9,376,634	307,865	9,684,4
est expense	(1,021,639)	(2,168,000)	(150)		(160,642)	(983,547)	(4,333,978)	300,430	(4,033,5
-segment	(634,110)	833,224	(163,962)	25,963		(61,115)			
	1,873,896	2,075,059	(11,839)	34,908	509,598	561,034	5,042,656	608,295	5,650,9
non-interest me (expense)									
-interest me	678,360	721,096	230,357	7,020,740	665,534	1,214,380	10,530,467	(8,463,129)	2,067,3
-interest nse	(143,704)	(290,347)	(53,671)	(6,964,671)	(620,687)	(550,919)	(8,623,999)	7,618,618	(1,005,3
-segment	132,690	70,016				(202,706)			
	667,346	500,765	176,686	56,069	44,847	460,755	1,906,468	(844,511)	1,061,9
r income ense)									
eral and nistrative nse	(1,865,933)	(868,608)	(14,318)	(18,452)	(170,765)	(967,923)	(3,905,999)	281,966	(3,624,0
ersal of vance for t loss and irment losses to credit loss	(127,220)	(61,064)	62,454	(16,861)	(227,144)	102,574	(267,261)	(62,313)	(329,5
	(1,993,153)	(929,672)	48,136	(35,313)	(397,909)	(865,349)	(4,173,260)	219,653	(3,953,6
rating income enses)	548,089	1,646,152	212,983	55,664	156,536	156,440	2,775,864	(16,563)	2,759,3
-operating me(expenses)	(20,208)	899	32,738		(5,547)	56,829	64,711	(19,140)	45,5
ncome ense) before me tax nse	527,881	1,647,051	245,721	55,664	150,989	213,269	2,840,575	(35,703)	2,804,8
me tax nse	(145,167)	(445,619)	(67,573)	(15,308)	(36,222)	(41,088)	(750,977)	(2,246)	(753,2
	382,714	1,201,432	178,148	40,356	114,767	172,181	2,089,598	(37,949)	2,051,6

ncome
ense)

(*) These adjustments are performed in order to present intersegment profit or loss adjustments based on managerial accounting as profit or loss in accordance with IFRS.

(2) Information on products and services

The products of the Group are classified as interest-bearing products such as loans, deposits and debt securities and non-interest bearing products such as loan commitment, credit commitment, equity securities, and credit card service. This classification of products has been reflected in the segment information presenting interest income and non-interest income.

(3) Information on geographical areas

Of the Group s revenue (interest income and non-interest income) from services, revenue from the domestic customers for the years ended December 31, 2016, 2017 and 2018 amounted to 22,265,508 million Won, 9,817,327 million Won and 10,440,668 million Won, respectively, and revenue from the foreign customers amounted to and 1,016,788 million Won, 1,120,257 million Won and 1,311,169 million Won, respectively. Of the Group s non-current assets (investments in joint ventures and associates, investment properties, premises and equipment and intangible assets), non-current assets attributed to domestic subsidiaries as of December 31, 2016, 2017 and 2018 are 3,498,327 million Won, 3,550,764 million Won and 3,551,924 million Won, respectively, and foreign subsidiaries are 240,946 million Won, 233,732 million Won and 236,050 million Won, respectively.

(4) Information about major customers

The Group does not have any single customer that generates 10% or more of the Group s total revenue.

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6. CASH AND CASH EQUIVALENTS

(1) Details of cash and cash equivalents are as follows (Unit: Korean Won in millions):

	December 31, 2017	December 31, 2018
Cash	2,009,363	2,107,861
Foreign currencies	617,155	725,083
Demand deposits	3,423,355	3,512,216
Fixed deposits	858,413	402,734
Total	6,908,286	6,747,894

(2) Significant transactions of investing activities and financing activities not involving cash inflows and outflows are as follows (Unit: Korean Won in millions):

	For the years ended December 31,	
	2017	2018
Changes in other comprehensive income related to valuation of financial assets at FVTOCI		2,505
Changes in other comprehensive income related to available-for-sale securities	(84,498)	
Changes in other comprehensive income related to valuation of equity method investments	612	2,958
Changes in other comprehensive income related to valuation gain or loss on cash flow hedge	777	(4,646)
Changes in financial assets at FVTOCI as a result of debt-equity swap		14,378
Changes in investments in associates due to debt-equity swap	51,227	
Changes in investments in associates due to accounts transfer	(62,571)	(89,151)
Changes in unpaid dividends on hybrid equity securities	(10,658)	3,569
Changes in equity related to assets held for sale	4,145	(4,145)
Classified to assets held for sale from premises and equipment		6,243

(3) Adjustments of liabilities from financing activities in current year are as follows (Unit: Korean Won in millions):

	For the year ended December 31, 2017					
			Not involving cash inflows and outflows			
	January 1, 2017	Cash flow	Foreign Exchange	Variation of gains on valuation of hedged items	Others	December 31, 2017
Borrowings	18,769,515	(3,634,883)	(350,429)		503	14,784,706
Debentures	23,565,449	4,817,701	(478,249)	(39,373)	4,123	27,869,651

Total	42,334,964	1,182,818	(828,678)	(39,373)	4,626	42,654,357

	For the year ended December 31, 2018					
			Not involving cash inflows and outflows			
	January 1, 2018	Cash flow	Foreign Exchange	Variation of gains on valuation of hedged items	Others	December 31, 2018
Borrowings	14,784,706	1,257,121	161,078		81	16,202,986
Debentures	27,869,651	612,331	267,339	(25,498)	12,039	28,735,862
Total	42,654,357	1,869,452	428,417	(25,498)	12,120	44,938,848

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7. FINANCIAL ASSETS AT FVTPL

(1) Financial assets at FVTPL are as follows (Unit: Korean Won in millions):

	December 31, 2017	December 31, 2018
Financial assets at fair value through profit or loss mandatorily measured at fair value		6,126,316
Financial assets held for trading	5,820,787	
Financial assets designated as at FVTPL	22,290	
Total	5,843,077	6,126,316

(2) Financial assets at fair value through profit or loss mandatorily measured at fair value and financial assets held for trading are as follows (Unit: Korean Won in millions):

	December 31, 2017	December 31, 2018
Deposits:		
Gold banking asset	25,972	26,935
Securities:		
Debt securities		
Korean treasury and government agencies	540,438	516,173
Financial institutions	1,476,498	533,393
Corporates	627,397	774,589
Equity securities	21,666	455,666
Capital contributions		422,614
Beneficiary certificates	13,041	985,417
Sub-total	2,679,040	3,687,852
Loans		385,450
Derivative assets	3,115,775	2,026,079
Total	5,820,787	6,126,316

(3) Financial assets at fair value through profit or loss designated as upon initial recognition are nil as of December 31, 2018 and financial assets at fair value through profit or loss designated as upon initial recognition as of December 31, 2017 are as follows (Unit: Korean Won in millions):

	December 31, 2017
Debt securities	9,694

Equity securities	12,596
Total	22,290

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8. AFS FINANCIAL ASSETS AND FINANCIAL ASSETS AT FVTOCI

(1) Detail of AFS financial assets as of December 31, 2017 are as follows (Unit: Korean Won in millions):

	For the year ended December 31, 2017			
	Amortized cost	Cumulative gains on valuation	Cumulative losses on valuation	Fair value
Debt securities:				
Korean treasury and government agencies	2,338,760	1,193	(9,386)	2,330,567
Financial institutions	5,225,921	1,504	(10,159)	5,217,266
Corporates	2,727,016	3,851	(5,635)	2,725,232
Asset-backed securities	309,518		(1,337)	308,181
Bond denominated in foreign currencies	2,449,954	3,100	(10,475)	2,442,579
Others	35,154	21	(12)	35,163
Sub-total	13,086,323	9,669	(37,004)	13,058,988
Equity securities	982,393	430,921	(2,236)	1,411,078
Beneficiary certificates	697,655	18,701	(3,728)	712,628
Securities loaned	169,988	664	(396)	170,256
Total	14,936,359	459,955	(43,364)	15,352,950

(2) Details of financial assets at FVTOCI as of December 31, 2018 are as follows (Unit: Korean Won in millions):

	December 31, 2018
Debt securities:	
Korean treasury and government agencies	1,358,378
Financial institutions	11,252,790
Corporates	1,824,843
Bond denominated in foreign currencies	2,636,209
Sub-total	17,072,220
Equity securities	951,174
Securities loaned	40,029
Total	18,063,423

(3) Details of equity securities designated as financial assets at FVTOCI as of December 31, 2018 are as follows (Unit: Korean Won in millions):

Purpose of acquisition	December 31, 2018 Fair value
Strategic business partnership	662,934
Debt-equity swap	287,990
Others (Cooperative insurance, etc.)	250
Total	951,174

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(4) Changes in the loss allowance and gross carrying amount of financial assets at FVTOCI are as follows (Unit: Korean Won in millions):

1) Loss allowance

	For the year ended December 31, 2018			
	Stage 1	Stage 2	Stage 3	Total
Beginning balance(*1)	(4,107)	(129)		(4,236)
Transfer to 12-month expected credit losses				
Transfer to lifetime expected credit losses				
Transfer to credit-impaired financial assets				
Net provision of loss allowance	(1,918)	(109)		(2,027)
Others(*2)	86			86
Ending balance	(5,939)	(238)		(6,177)

(*1) The beginning balance was restated in accordance with IFRS 9.
(*2) Others consist of foreign currencies translation, etc.
2) Gross carrying amount

	For the year ended December 31, 2018			
	Stage 1	Stage 2	Stage 3	Total
Beginning balance	12,843,997	30,212		12,874,209
Transfer to 12-month expected credit losses				
Transfer to lifetime expected credit losses				
Transfer to credit-impaired financial assets				
Acquisition	13,275,429	10,000		13,285,429
Disposal	(9,146,307)	(15,047)		(9,161,354)
Gain (loss) on valuation	70,017	(59)		69,958
Amortization on the effective interest method	10,195	47		10,242
Others(*)	33,765			33,765
Ending balance	17,087,096	25,153		17,112,249

(*) Others consist of foreign currencies translation, etc.
(5) The Group disposed equity securities designated as financial assets at FVTOCI as the creditors determined to sell the securities for the year ended December 31, 2018. The fair value and accumulative gain on valuation of that equity securities at disposal date are 9,379 million Won and 1,392 million Won, respectively.

9. HTM FINANCIAL ASSETS AND SECURITIES AT AMORTIZED COST

(1) Details of HTM financial assets as of December 31, 2017 are as follows (Unit: Korean Won in millions):

	For the year ended December 31, 2017			
	Amortized cost	Cumulative gains on valuation	Cumulative losses on valuation	Fair value
Korean treasury and government agencies	3,994,857	6,944	(15,266)	3,986,535
Financial institutions	7,245,426	2,923	(15,067)	7,233,282
Corporates	5,311,970	12,367	(25,326)	5,299,011
Bond denominated in foreign currencies	197,043	832	(1,024)	196,851
Total	16,749,296	23,066	(56,683)	16,715,679

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(2) Details of securities at amortized cost as of December 31, 2018 are as follows (Unit: Korean Won in millions):

	December 31, 2018
Korean treasury and government agencies	7,523,458
Financial institutions	9,474,922
Corporates	5,707,063
Bond denominated in foreign currencies	234,041
Loss allowance	(6,925)
Total	22,932,559

(3) Changes in the loss allowance and gross carrying amount of securities at amortized cost are as follows (Unit: Korean Won in millions):

1) Loss allowance

	For the year ended December 31, 2018			
	Stage 1	Stage 2	Stage 3	Total
Beginning balance(*1)	(5,078)			(5,078)
Transfer to 12-month expected credit losses				
Transfer to lifetime expected credit losses				
Transfer to credit-impaired financial assets				
Net provision of loss allowance	(1,922)			(1,922)
Disposal	22			22
Others(*2)	54			54
Ending balance	(6,924)			(6,924)

(*1) The beginning balance was restated in accordance with IFRS 9.
(*2) Others consist of foreign currencies translation, etc.
2) Gross carrying amount

	For the year ended December 31, 2018			
	Stage 1	Stage 2	Stage 3	Total
Beginning balance	16,749,296			16,749,296
Transfer to 12-month expected credit losses				
Transfer to lifetime expected credit losses				
Transfer to credit-impaired financial assets				
Acquisition	15,622,847			15,622,847
Disposal / Redemption	(9,426,757)			(9,426,757)

Amortization on the effective interest method	(7,970)	(7,970)
Others(*)	2,068	2,068
Ending balance	22,939,484	22,939,484

(*) Others consist of foreign currencies translation, etc.

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10. LOANS AND RECEIVABLES, AND LOANS AND OTHER FINANCIAL ASSETS AT AMORTIZED COST

(1) Details of loans and receivables as of December 31, 2017 and loans and other financial assets at amortized cost as of December 31, 2018 are as follows (Unit: Korean Won in millions):

	December 31, 2017	December 31, 2018
Due from banks	8,868,378	14,151,012
Loans	251,523,301	260,819,917
Other financial assets(other receivables)	6,714,525	7,486,649
Total	267,106,204	282,457,578

(2) Details of due from banks are as follows (Unit: Korean Won in millions):

	December 31, 2017	December 31, 2018
Due from banks in local currency:		
Due from The Bank of Korea (BOK)	6,246,496	11,034,602
Due from depository banks	30,003	90,988
Due from non-depository institutions	150	76
Due from the Korea Exchange	50,000	30,000
Others	97,365	85,915
Loss allowance	(1,541)	(3,069)
Sub-total	6,422,473	11,238,512
Due from banks in foreign currencies:		
Due from banks on demand	794,353	828,022
Due from banks on time	972,915	1,288,303
Others	679,554	798,493
Loss allowance	(917)	(2,318)
Sub-total	2,445,905	2,912,500
Total	8,868,378	14,151,012

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(3) Details of restricted due from banks are as follows (Unit: Korean Won in millions):

	Counterparty	December 31, 2017	Reason of restriction
Due from banks in local currency:			
Due from BOK	The BOK	6,246,496	Reserve deposits under the BOK Act
Others	The Korea Exchange and others	94,394	Central counterparty KRW margin and others
	Sub-total	6,340,890	
Due from banks in foreign currencies:			
Due from banks on demand	The BOK and others	787,520	Reserve deposits under the BOK Act and others
Others	The People s Bank of China and others	367,108	Reserve deposits and others
	Sub-total	1,154,628	
	Total	7,495,518	

	Counterparty	December 31, 2018	Reason of restriction
Due from banks in local currency:			
Due from BOK	The BOK	11,034,602	Reserve deposits under the BOK Act
Others	The Korea Exchange and others	81,889	Central counterparty KRW margin and others
	Sub-total	11,116,491	
Due from banks in foreign currencies:			
Due from banks on demand	The BOK and others	780,576	Reserve deposits under the BOK Act and others
Others	Korea Investment & Securities and others	798,493	Overseas futures and options trade deposits and others
	Sub-total	1,579,069	
	Total	12,695,560	

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(4) Changes in the loss allowance and gross carrying amount of due from banks for the year ended December 31, 2018 are as follows (Unit: Korean Won in millions):

1) Loss allowance

	For the year ended December 31, 2018			
	Stage 1	Stage 2	Stage 3	Total
Beginning balance(*1)	(3,092)			(3,092)
Transfer to 12-month expected credit losses				
Transfer to lifetime expected credit losses				
Transfer to credit-impaired financial assets				
Net provision of loss allowance	(2,219)			(2,219)
Others(*2)	(76)			(76)
Ending balance	(5,387)			(5,387)

(*1) The beginning balance was restated in accordance with IFRS 9.
(*2) Others consist of foreign currencies translation and etc.
2) Gross carrying amount

	For the year ended December 31, 2018			
	Stage 1	Stage 2	Stage 3	Total
Beginning balance	8,870,835			8,870,835
Transfer to 12-month expected credit losses				
Transfer to lifetime expected credit losses				
Transfer to credit-impaired financial assets				
Net increase	5,302,244			5,302,244
Other	(16,680)			(16,680)
Ending balance	14,156,399			14,156,399

(5) Details of loans are as follows (Unit: Korean Won in millions):

	December 31, 2017	December 31, 2018
Loans in local currency	200,213,230	210,701,421
Loans in foreign currencies	13,147,888	15,239,032
Domestic banker s letter of credit	2,516,907	2,934,366
Credit card accounts	6,827,295	8,051,384

Bills bought in foreign currencies	8,197,159	7,874,457
Bills bought in local currency	334,714	22,885
Factoring receivables	137,523	45,851
Advances for customers on guarantees	23,620	13,810
Private placement bonds	362,319	365,531
Securitized loans	563,152	1,377,072
Call loans	3,003,455	2,669,080
Bonds purchased under resale agreements	16,859,064	11,701,951
Others	607,325	1,037,283
Loan origination costs and fees	510,860	574,178
Discounted present value	(10,988)	(10,308)
Loss allowance	(1,770,222)	(1,778,076)
Total	251,523,301	260,819,917

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(6) Changes in the loss allowances on loans and receivables for the year ended December 31, 2016 and 2017, are as follows (Unit: Korean Won in millions):

	For the year ended December 31, 2016				
	Consumers	Corporates	Credit card	Others	Total
Beginning balance	(203,433)	(1,686,194)	(145,810)	(442,620)	(2,478,057)
Net provision	(73,356)	(536,359)	(207,730)	(73,318)	(890,763)
Recoveries of written-off loans	(53,679)	(192,183)	(44,393)	(19,233)	(309,488)
Charge-off	155,424	722,359	242,561	236,857	1,357,201
Sales of loans and receivables	2,055	113,177		91,800	207,032
Unwinding effect	10,319	66,901			77,220
Others(*)	(1,188)	13,457		(2,510)	9,759
Ending balance	(163,858)	(1,498,842)	(155,372)	(209,024)	(2,027,096)

	For the year ended December 31, 2017				
	Consumers	Corporates	Credit card	Others	Total
Beginning balance	(163,858)	(1,498,842)	(155,372)	(209,024)	(2,027,096)
Net reversal (provision) of loss allowance	(131,275)	(539,222)	(203,968)	12,192	(862,273)
Recoveries of loans previously charged off	(45,060)	(84,413)	(51,366)	(68)	(180,907)
Charge-off	142,099	453,249	228,640	63,181	887,169
Disposal	898	65,145		29,186	95,229
Unwinding effect	8,643	36,548			45,191
Others(*)	908	211,729	1	(193)	212,445
Ending balance	(187,645)	(1,355,806)	(182,065)	(104,726)	(1,830,242)

(*) Others consist of debt-equity swap, foreign currencies translation and etc.

Changes in the loss allowance on loans for the year ended December 31, 2018 are as follows (Unit: Korean Won in millions):

	For the year ended December 31, 2018					
	Consumers			Corporates		
	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
Beginning balance(*1)	(101,479)	(41,358)	(117,168)	(365,251)	(255,922)	(905,243)
Transfer to 12-month expected credit losses	(9,848)	8,966	882	(24,324)	22,658	1,666
Transfer to lifetime expected credit losses	5,905	(7,183)	1,278	15,074	(407,780)	392,706
Transfer to credit-impaired financial assets	79,078	47,343	(126,421)	62,731	97,750	(160,481)
Net reversal (provision) of loss allowance	(86,224)	(56,164)	(49,637)	(68,381)	193,392	(94,004)

Recoveries of loans previously charged off			(51,855)			(127,630)
Charge-off			204,552			290,109
Disposal		33	1,633		237	49,902
Unwinding effect			7,945			23,381
Others(*2)	(1,941)	(5)	(1,115)	31,840	46	1,921
Ending balance	(114,509)	(48,368)	(129,906)	(348,311)	(349,619)	(527,673)

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	For the year ended December 31, 2018						
	Credit card accounts			Sub-total			
	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Total
Beginning balance(*1)	(57,134)	(71,463)	(102,858)	(523,864)	(368,743)	(1,125,269)	(2,017,876)
Transfer to 12-month expected credit losses	(13,846)	13,738	108	(48,018)	45,362	2,656	
Transfer to lifetime expected credit losses	5,871	(6,194)	323	26,850	(421,157)	394,307	
Transfer to credit-impaired financial assets	82,406	84,048	(166,454)	224,215	229,141	(453,356)	
Net reversal (provision) of loss allowance	(82,083)	(98,260)	(33,205)	(236,688)	38,968	(176,846)	(374,566)
Recoveries of loans previously charged off			(57,565)			(237,050)	(237,050)
Charge-off			242,879			737,540	737,540
Disposal					270	51,535	51,805
Unwinding effect						31,326	31,326
Others(*2)	(1)			29,898	41	806	30,745
Ending balance	(64,787)	(78,131)	(116,772)	(527,607)	(476,118)	(774,351)	(1,778,076)

(*1) The beginning balance was restated in accordance with IFRS 9.
(*2) Others consist of debt-equity swap, foreign currencies translation and etc.
(7) Changes in the gross carrying amount of loans for the year ended December 31, 2018 are as follows (Unit: Korean Won in millions):

	For the year ended December 31, 2018					
	Consumers			Corporates		
	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
Beginning balance	103,502,347	5,487,758	326,739	131,096,396	4,466,354	1,622,409
Transfer to 12-month expected credit losses	1,921,485	(1,912,046)	(9,439)	1,081,702	(1,077,895)	(3,807)
Transfer to lifetime expected credit losses	(3,186,506)	3,199,993	(13,487)	(2,275,984)	2,733,860	(457,876)
Transfer to credit-impaired financial assets	(218,943)	(127,447)	346,390	(348,503)	(275,189)	623,692
Charge-off			(204,552)			(290,109)
Disposal		(478)	(31,910)		(2,781)	(166,347)
Net increase (decrease)	8,600,859	(619,771)	(22,247)	1,900,116	(813,091)	(307,304)
Ending balance	110,619,242	6,028,009	391,494	131,453,727	5,031,258	1,020,658

	For the year ended December 31, 2018						
	Credit card accounts			Sub-total			
	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Total
Beginning balance	5,721,743	935,266	177,983	240,320,486	10,889,378	2,127,131	253,336,995
Transfer to 12-month expected credit losses	221,984	(221,841)	(143)	3,225,171	(3,211,782)	(13,389)	
Transfer to lifetime expected credit losses	(287,623)	288,027	(404)	(5,750,113)	6,221,880	(471,767)	
Transfer to credit-impaired financial assets	(104,459)	(95,758)	200,217	(671,905)	(498,394)	1,170,299	
Charge-off			(242,879)			(737,540)	(737,540)
Disposal					(3,259)	(198,257)	(201,516)
Net increase (decrease)	1,310,199	77,078	74,215	11,811,174	(1,355,784)	(255,336)	10,200,054
Ending balance	6,861,844	982,772	208,989	248,934,813	12,042,039	1,621,141	262,597,993

(8) Details of other financial assets (other receivables) are as follows (Unit: Korean Won in millions):

	December 31, 2017	December 31, 2018
CMA accounts	135,000	185,999
Receivables	4,459,318	4,864,738
Accrued income	1,026,273	1,002,964
Telex and telephone subscription rights and refundable deposits	984,620	986,834
Other receivables	166,877	514,055
Loss allowance	(57,563)	(67,941)
Total	6,714,525	7,486,649

(9) Changes in the loss allowances on other financial assets for the year ended December 31, 2018 are as follows (Unit: Korean Won in millions):

	For the year ended December 31, 2018			
	Stage 1	Stage 2	Stage 3	Total
Beginning balance(*1)	(2,955)	(1,832)	(54,211)	(58,998)
Transfer to 12-month expected credit losses	(150)	139	11	
Transfer to lifetime expected credit losses	105	(416)	311	
Transfer to credit-impaired financial assets	6,509	304	(6,813)	
Net provision of loss allowance	(6,583)	(166)	(31,550)	(38,299)

Charge-off			28,200	28,200
Disposal		1	1,264	1,265
Others(*2)	(395)	(1)	287	(109)
Ending balance	(3,469)	(1,971)	(62,501)	(67,941)

(*1) The beginning balance was restated in accordance with IFRS 9.
(*2) Others consist of foreign currencies translation and etc.

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(10) Changes in the gross carrying amount of other financial assets for the year ended December 31, 2018 are as follows (Unit: Korean Won in millions):

	For the year ended December 31, 2018			
	Stage 1	Stage 2	Stage 3	Total
Beginning balance	6,662,335	29,124	79,912	6,771,371
Transfer to 12-month expected credit losses	7,573	(7,556)	(17)	
Transfer to lifetime expected credit losses	(11,418)	11,734	(316)	
Transfer to credit-impaired financial assets	(7,580)	(1,110)	8,690	
Charge-off			(28,201)	(28,201)
Disposal		(5)	(1,640)	(1,645)
Net increase and others	803,480	(3,994)	13,579	813,065
Ending balance	7,454,390	28,193	72,007	7,554,590

11. FAIR VALUE OF FINANCIAL ASSETS AND LIABILITIES

(1) The fair value hierarchy
The fair value hierarchy is determined by the levels of judgment involved in estimating fair values of financial assets and liabilities. The specific financial instruments characteristics and market condition such as volume of transactions and transparency are reflected to the market observable inputs. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities. The Group maximizes the use of observable inputs and minimizes the use of unobservable inputs when measuring fair value of its financial assets and financial liabilities. Fair value is measured based on the perspective of a market participant. As such, even when market assumptions are not readily available, the Group s own assumptions reflect those that market participants would use for measuring the assets or liabilities at the measurement date.

The fair value measurement is described in the one of the following three levels used to classify fair value measurements:

Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities. The types of financial assets or liabilities generally included in Level 1 are publicly traded equity securities, derivatives, and debt securities issued by governmental bodies.

Level 2 fair value measurements are those derived from inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. prices) or indirectly (i.e. derived from prices). The types of financial assets or liabilities generally included in Level 2 are debt securities not traded in active markets and derivatives traded in OTC but not required significant judgment.

Level 3 fair value measurements are those derived from valuation technique that include inputs for the assets or liabilities that are not based on observable market data (unobservable inputs). The types of financial assets or liabilities generally included in Level 3 are non-public securities and derivatives and debt securities of which valuation techniques require significant judgments and subjectivity.

The inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the level within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. The Group s assessment of the significance of a particular input to a fair value measurement in its entirety requires judgment and consideration of inherent factors of the asset or liability.

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(2) Fair value hierarchy of financial assets and liabilities measured at fair value are as follows (Unit: Korean Won in millions):

	December 31, 2017			
	Level 1(*1)	**Level 2(*1)**	**Level 3(*2)**	**Total**
Financial assets:				
Financial assets held for trading				
Deposits	25,972			25,972
Debt securities	405,942	2,238,391		2,644,333
Equity securities	21,666			21,666
Beneficiary certificates		13,041		13,041
Derivative assets	1,021	3,093,272	21,482	3,115,775
Sub-total	454,601	5,344,704	21,482	5,820,787
Financial assets designated as at FVTPL				
Debt securities			9,694	9,694
Equity securities			12,596	12,596
Sub-total			22,290	22,290
AFS financial assets				
Debt securities	2,710,172	10,348,816		13,058,988
Equity securities	399,214		1,011,864	1,411,078
Beneficiary certificates		68,722	643,906	712,628
Securities loaned	69,778	100,478		170,256
Sub-total	3,179,164	10,518,016	1,655,770	15,352,950
Derivative assets (Designated for hedging)		59,272		59,272
Total	3,633,765	15,921,992	1,699,542	21,255,299
Financial liabilities:				
Financial liabilities held for trading				
Deposits due to customers	25,964			25,964
Derivative liabilities	2,613	3,126,585	20,951	3,150,149
Sub-total	28,577	3,126,585	20,951	3,176,113
Financial liabilities designated as at FVTPL				
Equity-linked securities			160,057	160,057
Debentures		91,739		91,739
Sub-total		91,739	160,057	251,796

Derivative liabilities (Designated for hedging)		67,754		67,754
Total	28,577	3,286,078	181,008	3,495,663

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	December 31, 2018			
	Level 1(*1)	Level 2(*1)	Level 3	Total
Financial assets:				
Financial assets at fair value through profit or loss mandatorily measured at fair value				
Deposits	26,935			26,935
Debt securities	239,794	1,575,972	8,389	1,824,155
Equity securities	53,806		401,860	455,666
Capital contributions			422,614	422,614
Beneficiary certificates	2,130	128,988	854,299	985,417
Loans		205,000	180,450	385,450
Derivative assets	13,216	1,964,065	48,798	2,026,079
Sub-total	335,881	3,874,025	1,916,410	6,126,316
Financial assets at FVTOCI				
Debt securities	1,838,409	15,233,811		17,072,220
Equity securities	482,327		468,847	951,174
Securities loaned		40,029		40,029
Sub-total	2,320,736	15,273,840	468,847	18,063,423
Derivative assets (Designated for hedging)		35,503		35,503
Total	2,656,617	19,183,368	2,385,257	24,225,242
Financial liabilities:				
Financial liabilities at fair value through profit or loss mandatorily measured at fair value				
Deposits due to customers	27,058			27,058
Derivative liabilities	2,245	2,071,925	16,691	2,090,861
Sub-total	29,303	2,071,925	16,691	2,117,919
Financial liabilities at fair value through profit or loss designated as upon initial recognition				
Equity-linked securities			164,767	164,767
Derivative liabilities (Designated for hedging)		51,408		51,408
Total	29,303	2,123,333	181,458	2,334,094

(*1) There were no transfers between Level 1 and Level 2 of financial assets and liabilities measured at fair value. The Group recognizes transfers among levels at the end of reporting period in which events have occurred or conditions have changed.

(*2)

Certain unquoted AFS equity securities were measured at cost as of December 31, 2017, that amounted to 37,092 million Won. These unquoted equity instruments mostly represent minority investments in structured entity vehicles, such as asset securitization structures. They are measured at cost because (a) observable inputs of financial information to measure fair value were not available to obtain, (b) there was a significant variance in likely estimated cash flows or (c) the probabilities for various estimated cash flows could not be measured reliably. In addition, the Group has no intention to dispose these investments in the foreseeable future.

Financial assets and liabilities at fair value through profit or loss mandatorily measured at fair value, financial liabilities at fair value through profit or loss designated as upon initial recognition, financial assets at FVTOCI, and derivative assets (Designated for hedging) and liabilities (Designated for hedging) are recognized at fair value. Fair value is the amount that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date.

Financial instruments are measured at fair value using a quoted market price in active markets. If there is no active market for a financial instrument, the Group determines the fair value using valuation methods. Valuation methods and input variables for each type of financial instruments are as follows:

	Valuation methods	Input variables
Loans	The fair value of Loans is measured by the Binomial tree given the values of underlying assets and volatility.	Values of underlying assets, Volatility
Debt securities	The fair value is measured by discounting the projected cash flows of debt securities by applying the market discount rate that has been applied to a proxy company that has similar credit rating to the issuers of the securities.	Risk-free market rate, credit spread
Equity securities, capital contributions and Beneficiary certificates	Among DCF (Discounted Cash Flow) Model, FCFE (Free Cash Flow to Equity) Model, Comparable Company Analysis, Dividend Discount Model, Risk-adjusted Rate of Return Method, and Net Asset Value Method, more than one method is used given the characteristic of the subject of fair value measurement.	Risk-free market rate, market risk premium, Beta, etc.
Derivatives	The in-house developed model which is based on the models that are used by market participants in the valuation of general OTC derivative products, such as options, interest rate swaps, currency swap and currency forward that are based on inputs observable in the market. However, for some complicated financial instruments of which valuation should be based on some assumptions since some significant or all inputs to be used in the model are not observable in the market, the in-house derived model which is developed from the general valuation models, such as Finite Difference Method (FDM) or Monte Carlo Simulation.	Risk-free market rate, forward rate, volatility, foreign exchange rate, stock prices, etc.
Equity-linked securities	The fair value of security linked to stock prices or derivatives is measured by the models such as DCF model, FDM, or	Values of underlying assets, risk-free market rate, market rate, dividend and convenience yield, volatility, correlation

	Monte Carlo Simulation given the natures of the securities or underlying assets.	coefficient, credit spread, and foreign exchange rate
Debentures	The fair value is measured by discounting the projected cash flows of a debenture by applying the market discount rate that is reflecting credit rating of the Group.	Risk-free market rate, forward rate

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Valuation methods of financial assets and liabilities measured at fair value and classified into Level 3 and significant but unobservable inputs are as follows:

	Fair value measurement technique	Input variable	Range	Impact of changes in significant unobservable inputs on fair value measurement
Loans	Binomial tree	Stock, Volatility of underlying asset	15.49%~36.96%	Fair value increases as volatility of underlying asset increases.
Derivative assets	Option valuation model and others	Correlation coefficient	0.9~0.98	Variation of fair value increases as correlation coefficient increases.
		Volatility of underlying asset	14.00%~34.28%	Variation of fair value increases as volatility increases.
Derivative liabilities	Option valuation model and others	Correlation coefficient	0.9~0.98	Variation of fair value increases as correlation coefficient increases.
		Volatility of underlying asset	14.00%~34.28%	Variation of fair value increases as volatility increases.
Equity-linked securities	Monte Carlo Simulation and others	Correlation coefficient	0.005~0.658	Equity-linked securities variation of fair value increases if both volatility and correlation coefficient increase. However, when correlation coefficient decreases despite the increase in volatility, the variation of fair value of a compound financial instrument may decrease.
		Volatility of underlying asset	22.09%~31.19%	
Equity securities, capital contributions and Beneficiary certificates	External appraisal value and others	Terminal growth rate	0.00%	Fair value increases as terminal growth rate increases.
		Discount rate	3.67%~17.40%	Fair value increases as discount rate decreases.
		Volatility of real estate sale price	0.00%	Fair value increases as volatility of real estate sale price increases.

Fair value of financial assets and liabilities classified into Level 3 is measured by the Group using its own valuation methods or using external specialists. Unobservable inputs used in the fair value measurements are produced by the internal system of the Group and the appropriateness of inputs is reviewed regularly.

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(3) Changes in financial assets and liabilities measured at fair value classified into Level 3 are as follows (Unit: Korean Won in millions):

	For the year ended December 31, 2016						
	January 1, 2016	Net Income (loss)(*1)	Other comprehensive income (loss)	Purchases/ Issuances	Disposals/ Settlements	Transfer to or from level 3(*2)	December 31, 2016
Financial assets:							
Financial assets held for trading Derivative instrument assets(*3)	78,676	(29,117)		13,640	(39,506)	(540)	23,153
Financial assets designed at FVTPL							
Debt securities	986	(161)		4,509	(986)		4,348
Equity securities	11,609	1,043					12,652
Sub-total	12,595	882		4,509	(986)		17,000
AFS financial assets							
Equity securities(*4)	993,368	(6,986)	57,323	205,749	(205,348)	(19,171)	1,024,935
Beneficiary certificates	377,070	(868)	5,794	174,024	(25,509)		530,511
Others	5,308	594	(643)		(5,259)		
Sub-total	1,375,746	(7,260)	62,474	379,773	(236,116)	(19,171)	1,555,446
Derivative assets	5,973	3,877			(9,751)		99
Total	1,472,990	(31,618)	62,474	397,922	(286,359)	(19,711)	1,595,698
Financial liabilities:							
Financial liabilities held for trading Derivative liabilities	78,607	(8,322)		1,155	(37,916)		33,524
Financial liabilities designated at FVTPL							
Equity-linked securities	747,351	71,079			(144,721)		673,709
Total	825,958	62,757		1,155	(182,637)		707,233

(*1) The losses that increase financial liabilities are presented as positive amounts, and the gains that decrease financial liabilities are presented as negative amounts. The loss amounting to 94,238 million Won for the year ended December 31, 2016, which is from financial assets and liabilities that the Group holds, has been recognized in net gain (loss) on financial instruments at FVTPL and net gain (loss) on AFS financial assets in the statement of comprehensive income.

(*2) The Group recognizes transfers between levels at the end of reporting period within which events have occurred or conditions have changed.

(*3) As the variables used for the valuation of currency related derivatives became observable in the market, such derivatives were transferred out of Level 3 to Level 2.

(*4) AFS financial assets were transferred out of level 1 to level 3 upon the change of the fair value measurement method of the assets by using market the external valuation specialists from previously using quoted prices in the active market, in the opposite case, they were transferred out of level 3 to level 1.

	For the year ended December 31, 2017						
	January 1, 2017	Net Income (loss)(*1)	Other comprehensive income	Purchases/ Issuances	Disposals/ Settlements	Transfer to or out of level 3(*2)	December 31, 2017
Financial assets:							
Financial assets held for trading Derivative assets	23,153	22,362		1,398	(25,431)		21,482
Financial assets designed at FVTPL							
Debt securities	4,348	346		5,000			9,694
Equity securities	12,652	(56)					12,596
Sub-total	17,000	290		5,000			22,290
AFS financial assets							
Equity securities	1,024,935	27,986	24,442	65,961	(131,460)		1,011,864
Beneficiary certificates	530,511	212	(4,321)	226,975	(109,471)		643,906
Sub-total	1,555,446	28,198	20,121	292,936	(240,931)		1,655,770
Derivative assets	99	329			(428)		
Total	1,595,698	51,179	20,121	299,334	(266,790)		1,699,542
Financial liabilities:							
Financial liabilities held for trading Derivative liabilities	33,524	24,866		500	(37,939)		20,951
Financial liabilities designated as at FVTPL							
Equity-linked securities	673,709	112,015			(625,667)		160,057
Total	707,233	136,881		500	(663,606)		181,008

(*1) The losses that increase financial liabilities are presented as positive amounts, and the gains that decrease financial liabilities are presented as negative amounts. The loss amounting to 34,621 million Won for the year ended December 31, 2017, which is from financial assets and liabilities that the Group holds, has been recognized in net gain (loss) on financial instruments at FVTPL and net gain (loss) on AFS financial assets in the statement of comprehensive income.

(*2) The Group recognizes transfers between levels at the end of reporting period within which events have occurred or conditions have changed.

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	For the year ended December 31, 2018						
	January 1, 2018	**Net Income (loss)(*1)**	**Other comprehensive income**	**Purchases/ issuances**	**Disposals/ settlements**	**Transfer to or out of level 3(*2)**	**December 31, 2018**
Financial assets:							
Financial assets at fair value through profit or loss mandatorily measured at fair value							
Debt securities	9,694	(28)		3,000	(4,277)		8,389
Equity securities	280,171	56,271		67,953	(2,535)		401,860
Capital contributions	294,121	16,119		144,207	(31,833)		422,614
Beneficiary certificates	654,066	16,391		5,151,535	(4,971,003)	3,310	854,299
Loans	165,001	3,378		150,103	(138,032)		180,450
Derivative assets	19,346	75,696		4,722	(50,966)		48,798
Sub-total	1,422,399	167,827		5,521,520	(5,198,646)	3,310	1,916,410
Financial assets at FVTOCI							
Equity securities	451,287		19,688	432	(2,560)		468,847
Total	1,873,686	167,827	19,688	5,521,952	(5,201,206)	3,310	2,385,257
Financial liabilities:							
Financial liabilities at fair value through profit or loss mandatorily measured at fair value							
Derivative liabilities	20,951	46,409		255	(50,921)	(3)	16,691
Financial liabilities at fair value through profit or loss designated as upon initial recognition							
Equity-linked securities	160,057	(16,243)		183,039	(162,086)		164,767
Total	181,008	30,166		183,294	(213,007)	(3)	181,458

(*1) The losses that increase financial liabilities are presented as positive amounts, and the gains that decrease financial liabilities are presented as negative amounts. The gain amounting to 137,777 million Won for the years ended December 31, 2018, which is from financial assets and liabilities that the Group holds as at the end of the periods, has been recognized in net gain (loss) on financial assets at FVTPL and net gain (loss) on financial assets at FVTOCI in the consolidated statement of comprehensive income.

(*2) The Group recognizes transfers between levels at the end of reporting period within which events have occurred or conditions have changed.

(4) Sensitivity analysis on the unobservable inputs used for measuring Level 3 financial instruments

The sensitivity analysis of the financial instruments has been performed by classifying with favorable and unfavorable changes based on how changes in unobservable assumptions would have effects on the fluctuations of financial instruments value. When the fair value of a financial instrument is affected by more than one unobservable assumption, the below table reflects the most favorable or the most unfavorable changes which resulted from varying the assumptions individually. The sensitivity analysis was performed for two types of level 3 financial instruments: (1) interest rate related derivatives, currency related derivatives, equity related derivatives, equity-linked securities beneficiary certificates and loans of which fair value changes are recognized as net income; (2) equity securities of which fair value changes are recognized as other comprehensive income.

Among the financial instruments that are classified as Level 3 amounting to 1,880,550 million Won and 2,566,715 million Won as of December 31, 2017 and 2018 respectively, equity investments of 1,146,751 million

Won and 1,642,008 million Won that are considered to provide the best estimate of fair value are excluded from the sensitivity analysis.

The following table presents the sensitivity analysis to disclose the effect of reasonably possible volatility on the fair value of a Level 3 financial instruments (Unit: Korean Won in millions):

	For the year ended December 31, 2016			
	Net income (loss)		Other comprehensive income (loss)	
	Favorable	Unfavorable	Favorable	Unfavorable
Financial assets:				
Financial assets held for trading				
Derivative assets(*1)	861	(2,248)		
Financial assets designed at FVTPL				
Debt securities(*4)	19	(18)		
Equity securities(*4)	688	(639)		
AFS Financial Assets				
Equity securities(*2)(*3)			31,412	(18,551)