

KakaoBank of Korea Corp.

Financial Statements

December 31, 2018 and 2017

KakaoBank of Korea Corp.
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December 31, 2018 and 2017

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Independent Auditor's Report

(English Translation of a Report Originally Issued in Korean)

To the Board of Directors and Shareholders of
KakaoBank of Korea Corp.

Opinion

We have audited the accompanying financial statements of KakaoBank of Korea Corp. (the Company), which comprise the statements of financial position as at December 31, 2018 and 2017, and the statements of comprehensive income, statements of changes in equity and statements of cash flows for the years then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of KakaoBank of Korea Corp. as at December 31, 2018 and 2017, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS).

Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Company in accordance with the ethical requirements of the Republic of Korea that are relevant to our audit of the financial statements and we have fulfilled our other ethical responsibilities in accordance with the ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Other Matter

Auditing standards and their application in practice vary among countries. The procedures and practices used in the Republic of Korea to audit such financial statements may differ from those generally accepted and applied in other countries.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Korean IFRS, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Korean Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Korean Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Samuel PricewaterhouseCoopers

Seoul, Korea

February 26, 2019

This report is effective as of February 26, 2019, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying financial statements and notes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

KakaoBank of Korea Corp.
Statements of Financial Position
December 31, 2018 and 2017

<i>(in Korean won)</i>	Notes	2018	2017
Assets			
Cash and due from financial institutions	4, 21, 23	₩ 1,640,471,526,557	₩ 423,353,591,275
Financial investments	5, 21, 23	1,099,702,226,411	523,648,823,645
Loans	6, 21, 23	9,082,098,248,613	4,621,656,036,172
Property and equipment	7	32,020,635,875	32,664,776,427
Intangible assets	8	64,176,461,518	77,361,957,430
Current tax assets	22	2,246,444,770	376,476,780
Net defined benefit assets	12	-	390,734,614
Other assets	9, 21, 23	206,007,269,359	162,752,356,024
Total assets		<u>₩ 12,126,722,813,103</u>	<u>₩ 5,842,204,752,367</u>
Liabilities			
Deposits	11, 21, 23	10,811,627,835,273	5,048,299,700,757
Net defined benefit liabilities	12	592,151,856	-
Provisions	13	8,086,994,520	6,929,778,978
Other liabilities	14, 21, 23	166,008,089,939	119,118,497,913
Total liabilities		<u>10,986,315,071,588</u>	<u>5,174,347,977,648</u>
Equity			
Share capital	15	1,300,000,000,000	800,000,000,000
Capital adjustments	15	(18,738,752,740)	(11,534,296,500)
Accumulated other comprehensive income	15	338,531,377	(816,126,325)
Accumulated deficit	15, 28	(141,192,037,122)	(119,792,802,456)
(Provision of regulatory reserve for credit losses 2018 : ₩ nil, 2017 : ₩ nil)			
(Provision of unearned reserve for credit losses 2018 : ₩ (-)30,361,373,502, 2017: ₩ nil)			
(Amount required to reserve for credit losses 2018 : ₩ (-)42,219,969,729, 2017 : ₩ (-)30,361,373,502)			
(Amounts estimated to be appropriated 2018 : ₩ nil, 2017 : ₩ nil)			
Total equity		<u>1,140,407,741,515</u>	<u>667,856,774,719</u>
Total liabilities and equity		<u>₩ 12,126,722,813,103</u>	<u>₩ 5,842,204,752,367</u>

The above statements of financial position should be read in conjunction with the accompanying notes.

KakaoBank of Korea Corp.
Statements of Comprehensive Income
Years Ended December 31, 2018 and 2017

<i>(in Korean won)</i>	Notes	2018	2017
Operating income			
Interest income	16, 21	₩ 293,932,284,419	₩ 50,325,415,168
Fee and commission income	17, 21	67,926,349,479	16,995,020,337
Gain on sale of financial assets at fair value through profit or loss	21	10,077,424,249	-
Gain on sale of financial investments	21	746,518,227	1,093,275,026
Other operating income	19	2,898,933,152	497,110,636
		<u>375,581,509,526</u>	<u>68,910,821,167</u>
Operating expense			
Interest expenses	16, 21	110,538,557,846	17,823,136,485
Fee and commission expenses	17, 21	127,621,960,703	55,254,549,672
Loss on sale of financial investments	21	-	2,311,604
Selling and administrative expenses	18	129,807,900,073	75,374,167,353
Other operating expenses	19	14,021,308,722	6,359,167,435
		<u>381,989,727,344</u>	<u>154,813,332,549</u>
Provision for credit losses on financial assets	6, 21, 23	<u>14,800,499,883</u>	<u>18,305,794,207</u>
Operating loss		(21,208,717,701)	(104,208,305,589)
Non-operating income	20	14,692,184	9,667,075
Non-operating expenses	20	86,212,950	35,594,946
Loss before income tax		(21,280,238,467)	(104,234,233,460)
Income tax expense(benefit)	22	(325,672,684)	256,801,811
Loss for the period	28	<u>₩ (20,954,565,783)</u>	<u>₩ (104,491,035,271)</u>
(Adjusted loss after provision of regulatory reserve for credit losses 2018 : ₩ (-)63,174,535,512, 2017 : ₩ (-)134,852,408,773)			
Other comprehensive income			
<i>Items that may be subsequently reclassified to profit or loss</i>			
Gain (loss) on valuation of financial assets at fair value through other comprehensive income (2017: Changes in the fair value of available-for-sale financial assets)	15, 21	2,072,697,652	(889,211,873)
<i>Items that will not be reclassified to profit or loss</i>			
Remeasurements of net defined benefit liability (asset)	12,15	(918,039,950)	73,085,548
Other comprehensive loss for the period, net of tax		<u>1,154,657,702</u>	<u>(816,126,325)</u>
Total comprehensive loss for the period		<u>₩ (19,799,908,081)</u>	<u>₩ (105,307,161,596)</u>

The above statements of comprehensive income should be read in conjunction with the accompanying notes.

KakaoBank of Korea Corp.
Statements of Changes in Equity
Years Ended December 31, 2018 and 2017

(in Korean won)

	Notes	Share Capital	Capital Adjustments	Accumulated Other Comprehensive Income	Accumulated Deficit	Total
Balance at January 1, 2017		₩ 300,000,000,000	₩ (4,329,862,500)	₩ -	₩ (15,301,767,185)	₩ 280,368,370,315
Total comprehensive income(loss)						
Loss for the period		-	-	-	(104,491,035,271)	(104,491,035,271)
Other comprehensive income(loss)		-	-	(889,211,873)	-	(889,211,873)
Changes in the fair value of available-for-sale financial assets		-	-	73,085,548	-	73,085,548
Remeasurements of net defined benefit liability (asset)		-	-	-	-	-
Transactions with owners						
Issuance of ordinary shares		500,000,000,000	(7,204,434,000)	-	-	492,795,566,000
Balance at December 31, 2017		₩ 800,000,000,000	₩ (11,534,296,500)	₩ (816,126,325)	₩ (119,792,802,456)	₩ 667,856,774,719
Balance at January 1, 2018	29	₩ 800,000,000,000	₩ (11,534,296,500)	₩ (816,126,325)	₩ (119,792,802,456)	₩ 667,856,774,719
The effect of changes in accounting policies						
Balance after reflecting the change of accounting policies		800,000,000,000	(11,534,296,500)	(816,126,325)	(120,237,471,339)	667,412,105,836
Total comprehensive income(loss)						
Loss for the period		-	-	-	(20,954,565,783)	(20,954,565,783)
Other comprehensive income(loss)		-	-	-	-	-
Gain(loss) on valuation of financial assets		-	-	2,072,697,652	-	2,072,697,652
at fair value through other comprehensive income		-	-	(918,039,950)	-	(918,039,950)
Remeasurements of net defined benefit liability (asset)		-	-	-	-	-
Transactions with owners						
Issuance of shares		500,000,000,000	(7,204,456,240)	-	-	492,795,543,760
Balance at December 31, 2018		₩ 1,300,000,000,000	₩ (18,738,752,740)	₩ 338,531,377	₩ (141,192,037,122)	₩ 1,140,407,741,515

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The above statements of changes in equity should be read in conjunction with the accompanying notes.

KakaoBank of Korea Corp.
Statements of Cash Flows
Years Ended December 31, 2018 and 2017

(in Korean won)	Note	2018	2017
Cash flows from operating activities			
Loss for the period	₩	(20,954,565,783)	₩ (104,491,035,271)
Adjustment of profit (loss) items			
Interest income		(293,932,284,419)	(50,325,415,168)
Interest expenses		110,538,557,846	17,823,136,485
		<u>(183,393,726,573)</u>	<u>(32,502,278,683)</u>
Adjustment for non-cash items			
Provision for credit losses on financial assets		14,800,499,883	18,305,794,207
Gain on sale of financial investments		(746,518,227)	(1,090,963,422)
Depreciation		7,934,864,115	3,326,947,542
Amortization		16,016,013,493	7,015,266,570
Income tax expense(benefit)		(325,672,684)	256,801,811
Post-employment benefits		1,897,394,040	1,710,445,422
Unwinding of discount for asset retirement obligation		56,382,044	31,498,332
Long-term employee benefits		1,821,419,597	1,633,918,122
Provisions (reversal) for unused loan commitments		(921,201,347)	3,846,352,748
		<u>40,533,180,914</u>	<u>35,036,061,332</u>
Change in operating assets and liabilities			
Increase in due from financial institutions		(1,216,274,855,682)	(404,925,603,745)
Increase in loans		(4,506,141,404,421)	(4,643,376,352,105)
Increase in plan assets		(2,091,481,866)	(2,655,638,780)
Increase in other assets		(23,041,446,794)	(147,720,298,673)
Increase in deposits		5,763,328,134,516	5,048,299,700,757
Decrease in long-term employee benefits		(50,000,000)	-
Increase in other liabilities		5,233,001,258	103,184,944,360
		<u>20,961,947,011</u>	<u>(47,193,248,186)</u>
Income taxes paid		(1,869,967,990)	(264,858,210)
Interest received		304,769,046,984	43,374,406,557
Interest paid		(68,958,884,915)	(2,961,337,863)
Net cash inflow (outflow) from operating activities		<u>91,087,029,648</u>	<u>(109,002,290,324)</u>
Cash flows from investing activities			
Disposal of financial assets at fair value through other comprehensive income (2017: Disposal of available-for-sale financial assets)		390,382,080,719	1,391,272,493,539
Acquisition of financial assets at fair value through other comprehensive income (2017: Acquisition of available-for-sale financial assets)		(512,479,576,005)	(1,700,527,938,945)
Repayments of financial assets at amortized cost (2017: Repayments of held-to-maturity financial assets)		75,000,000,000	-
Acquisition of financial assets at amortized cost (2017: Acquisition of held-to-maturity financial assets)		(524,614,219,484)	(214,746,171,776)
Acquisition of property and equipment		(7,116,652,489)	(23,351,081,684)
Acquisition of intangible assets		(1,994,517,581)	(41,185,171,079)
Increase in leasehold deposits provided		(720,369,668)	(1,021,992,861)
Increase in advance payments		(1,496,239,300)	(836,000,000)
Net cash outflow from investing activities		<u>(583,039,493,808)</u>	<u>(590,395,862,806)</u>
Cash flows from financing activities			
Proceeds from issuance of shares		492,795,543,760	492,795,566,000
Net cash inflow from financing activities		<u>492,795,543,760</u>	<u>492,795,566,000</u>
Net increase (decrease) in cash and cash equivalents		843,079,600	(206,602,587,130)
Cash and cash equivalents at the beginning of the year	4	1,002,431,400	207,605,018,530
Cash and cash equivalents at the end of the year	4	<u>₩ 1,845,511,000</u>	<u>₩ 1,002,431,400</u>

The above statements of cash flows should be read in conjunction with the accompanying notes.

KakaoBank of Korea Corp.
Notes to the Financial Statements
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1. The Company

KakaoBank of Korea Corp.(the "Company") is an internet-only bank that provides non-face-to-face banking service through electronic financial transaction method. The Company provides innovative customer service combining finance and IT technology, which is differentiated from common commercial banking service. The Company's headquarters is located at 231, Pangyoyeok-ro, Bundang-Gu, Seongnam-si, Gyeonggi-do, Korea. And, the Company operates two mobile banking centers and three data processing centers to provide better services to the customers.

The Company was established on January 22, 2016. The Company launched for the service on July 27, 2017, after obtaining an approval of internet-only bank business on April 5, 2017.

The initial capital of the Company is amounted to ₩900 million and as at December 31, 2018, the Company's capital has been increased to ₩1,300,000 million through issuance of shares. Shareholders as at December 31, 2018, are as follows:

	Number of ordinary shares (in shares)	Number of preferred shares (in shares)	Percentage of ownership (%)
Korea Investment Holdings Co., Ltd.	116,000,000	14,000,000	50.00
Kakao Corp.	20,000,000	26,800,000	18.00
Kookmin Bank	20,000,000	6,000,000	10.00
Netmarble Corporation	8,000,000	2,400,000	4.00
Seoul Guarantee Insurance Co., Ltd.	8,000,000	2,400,000	4.00
Korea Post	8,000,000	2,400,000	4.00
eBay Korea Co., Ltd.	8,000,000	2,400,000	4.00
Skyblue Luxury Investment Pte.Ltd. ¹	8,000,000	2,400,000	4.00
YES24 Co.,Ltd	4,000,000	1,200,000	2.00
	<u>200,000,000</u>	<u>60,000,000</u>	<u>100.00</u>

¹ Skyblue is a wholly-owned subsidiary of Tencent, a leading provider of internet value added services in China.

KakaoBank of Korea Corp.
Notes to the Financial Statements
December 31, 2018 and 2017

2. Basis of Preparation

The Company maintains its accounting records in Korean won and prepares statutory financial statements in the Korean language (Hangul) in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS). The accompanying financial statements have been condensed, restructured and translated into English from the Korean language financial statements.

Certain information attached to the Korean language financial statements, but not required for a fair presentation of the Company's financial position, financial performance or cash flows, is not presented in the accompanying financial statements.

The financial statements of the Company have been prepared in accordance with Korean IFRS. These are the standards, subsequent amendments and related interpretations issued by the International Accounting Standards Board (IASB) that have been adopted by the Republic of Korea.

The financial statements 2018 were approved for issue by the Board of Directors on January 30, 2019 and are subject to the approval of shareholders at their Annual General Meeting on March 25, 2019.

2.1 Measurement Basis

The financial statements have been prepared on the historical cost basis, except for the following material items in the statement of financial position:

- Derivative financial instruments are measured at fair value
- Financial assets at fair value through profit or loss are measured at fair value
- Financial assets at fair value through other comprehensive income are measured at fair value
- Net defined benefit liabilities (assets) are recognized at the net of total the present value of net defined benefit obligations less fair value of plan assets less costs to sell.

2.2 Functional and Presentation Currency

The financial statements of the Company are prepared in functional currency of the primary economic environment in which the Company operates. The financial statements are presented in Korean won, which is the Company's functional and presentation currency.

2.3 Use of Estimates and Judgment

The preparation of the financial statements in conformity with Korean IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Management's estimates of outcomes may differ from actual outcomes if management's estimates and assumptions based on

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management's best judgment at the end of the reporting date are different from the actual environment.

Estimates and assumptions are continually evaluated and any change in an accounting estimate is recognized prospectively by including it in profit or loss in the period of the change, if the change affects that period only. Alternatively if the change in accounting estimate affects both the period of change and future periods, that change is recognized in the profit or loss of all those periods.

Information about critical judgments of management in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements and assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next financial period is as follows:

Income taxes

The Company recorded, based on its best estimate, current taxes and deferred taxes that the Company will be liable in the future for the operating results as at the financial year end. However, the final tax outcome in the future may be different from the amounts that were initially recorded. Such differences will impact the current and deferred tax assets and liabilities in the period in which such determination is made.

Provisions for Credit Losses (allowances for loan losses, provisions for unused loan commitments)

The Company determines and recognizes allowances for losses on financial assets at amortized cost and fair value through other comprehensive income through impairment test and recognizes provisions for unused loan commitments. The provisions for credit losses are determined by the methodology and assumptions used for estimating collectively assessed allowances for groups of loans and unused loan commitments.

Net defined benefit liability

Net defined benefit liability depends on numerous factors, especially variation in discount rate that are determined based on an actuarial basis.

Fair value of financial instruments

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The Company uses its judgment to select a variety of methods and make assumptions that are mainly based on market conditions existing at the end of each reporting period.

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3. Significant Accounting Policies

The significant accounting policies applied in the preparation of these financial statements are set out below. The significant accounting policies applied in the preparation of these financial statements are the same as those that applied to the financial statements for the period ended December 31, 2017, except for the standards and amendments for the first time for their annual reporting period commencing January 1, 2018 as explained in Note 3.15.

However, certain accounts in the comparative financial statement for the year ended December 31, 2017, have been reclassified to conform to the presentation of the financial statement for the year ended December 31, 2018, in order to facilitate the comparison with the current year's financial statements except for certain Notes. Such reclassifications do not affect the reported prior year's net profit or loss or net asset value. Details of the reclassified accounts are as follows:

Reclassification

Financial investments	Financial assets at fair value through other comprehensive income (2017: Available-for-sale financial assets)
	Financial assets at amortized cost (2017: Held-to-maturity financial assets)

3.1 Foreign Currency Translation

Foreign currency transactions are translated into the functional currency using the exchange rates at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at year end exchange rates are generally recognized in profit or loss.

Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined. Translation differences on assets and liabilities carried at fair value are reported as part of the fair value gain or loss. For example, translation differences on non-monetary assets and liabilities such as financial instruments at fair value through profit or loss are recognized in profit or loss as part of the fair value gain or loss and translation differences on non-monetary assets such as financial instruments at fair value through other comprehensive income are recognized in other comprehensive income.

3.2 Cash and Cash Equivalents

The Company classifies an investment as cash and cash equivalents only when it has a maturity of three months or less. Equity investments are excluded from cash equivalents unless they are, in substance, cash equivalents, for example in the case of preferred shares acquired within a short period of their maturity and with a specified redemption date.

KakaoBank of Korea Corp.
Notes to the Financial Statements
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3.3 Financial Assets

The Company recognizes financial assets in the statement of financial position when the Company becomes a party to the contractual provisions of the instrument. Regular way purchases and sales of financial assets (i.e. a purchase or sale of a financial asset under a contract whose terms require delivery of the asset within the time frame established generally by regulation or convention in the marketplace concerned) are recognized on trade-date, the date on which the Company commits to purchase or sell the asset.

3.3.1 Classification

From January 1, 2018, the Company classifies its financial assets in the following measurement categories:

- those to be measured subsequently at fair value (either through other comprehensive income, or through profit or loss), and
- those to be measured at amortized cost.

The classification depends on the Company's business model for managing the financial assets and the contractual terms of the cash flows.

For financial assets measured at fair value, gains and losses will either be recorded in profit or loss or other comprehensive income. For investments in debt instruments, this will depend on the business model in which the investment is held. The Company reclassifies debt investments when, and only when its business model for managing those assets changes.

For investments in equity instruments that are not held for trading, this will depend on whether the Company has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income. Gains or losses arising from a change in the fair value for investments in equity instruments that are not elected for fair value through other comprehensive income are recognized in profit or loss.

3.3.2 Measurement

At initial recognition, the Company measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset or the issuance of the financial liabilities. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

A. Debt instruments

Subsequent measurement of debt instruments depends on the Company's business model for

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managing the asset and the cash flow characteristics of the asset. The Company classifies its debt instruments into one of the following three measurement categories:

- Financial assets at amortized cost: Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. A gain or loss on a debt investment that is subsequently measured at amortized cost and is not part of a hedging relationship is recognized in profit or loss when the asset is derecognized or impaired. Interest income from these financial assets is included in 'interest income' in the statements of profit or loss using the effective interest rate method.

Carrying amount of financial assets at amortized cost is calculated as net of allowances and measurement of allowances is explained in Note 3.3.5.

- Financial assets at fair value through other comprehensive income: Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at fair value through other comprehensive income. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment loss (reversal of impairment loss), interest income and foreign exchange gains and losses which are recognized in profit or loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss. Interest income from these financial assets is included in 'finance income' using the effective interest rate method. Foreign exchange gains and losses are presented in 'interest income' in the statements of profit or loss.
- Financial assets at fair value through profit or loss: Assets that do not meet the criteria for amortized cost or fair value through other comprehensive income are measured at fair value through profit or loss. A gain or loss on a debt investment that is subsequently measured at fair value through profit or loss and is not part of a hedging relationship is recognized in profit or loss and presented net in the statement of profit or loss within 'interest income' in the year in which it arises.

B. Equity instruments

The Company subsequently measures all equity investments at fair value. Where the Company's management has elected to present fair value gains and losses on equity investments in other comprehensive income, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividend income from such investments continue to be recognized in profit or loss when the right to receive payments is established.

Changes in the fair value of financial assets at fair value through profit or loss are recognized in 'gain (loss) on sale of financial assets at fair value through profit or loss' in the statement of profit or loss as applicable. Impairment loss (reversal of impairment loss) on equity investments

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measured at fair value through other comprehensive income are not reported separately from other changes in fair value.

3.3.3 Derecognition of financial assets

Financial assets are derecognized when the contractual rights to the cash flows from the financial assets expire or the rights to receive the contractual cash flows have been transferred from the financial assets as well as substantially all the risks and rewards of ownership of the financial assets are also transferred, or all the risks and rewards of ownership of the financial assets are neither substantially transferred nor retained and the Company has not retained control. If the Company retains control of financial assets, the Company continues to recognize the financial asset to the extent of its continuing involvement in the financial asset and recognized as a separate asset or liability.

If the Company transfers the contractual rights to receive the cash flows of the financial asset, but retains substantially all the risks and rewards of ownership of the financial asset, the Company continues to recognize the transferred asset in its entirety and recognize a financial liability for the consideration received.

The Company writes off the loan instruments and debt securities in its entirety or to a portion thereof when the principal and interest are determined to be no longer recoverable. In general, the Company considers write-off when it is determined that the debtor does not have sufficient resources or income to cover the principal and interest, and this write-off decision is made in accordance with internal policy, if necessary, approved by external regulators. After the write-off, the Company has a right to collect the written-off loans continuously according to the internal policy.

3.3.4 Offsetting of financial assets and liabilities

A financial asset and a financial liability are offset and the net amount presented in the statement of financial position when, and only when, the Company currently has a legally enforceable right to offset the recognized amounts and intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously.

3.3.5 Expected credit loss of financial assets

The Company measures expected credit loss and recognizes loss allowance at the end of the reporting period for financial assets at amortized cost and fair value through other comprehensive income with the exception of financial asset at fair value through profit or loss.

Expected credit losses are estimated at present value of probability-weighted amount that is determined by evaluating a range of possible outcomes. The Company measures expected credit losses by reflecting reasonable and supportable information that is reasonably available at the reporting date without undue cost or effort, including information about past events, current conditions and forecasts of future economic conditions.

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The approaches of measuring expected credit losses in accordance with Korean IFRS are as follows:

- General approach: for financial assets not subject to the below approach and unused loan commitments on off-balance sheet
- Credit-impaired approach: for financial assets that are credit-impaired at the time of acquisition

Application of general approach is differentiated depending on whether credit risk has increased significantly after initial recognition. After initial recognition, loss allowances for the assets without significant increase in credit risk are measured at the amount of 12 month expected credit losses, whereas the loss allowances for the assets with significant increase in credit risk are measured at the amount of lifetime expected credit losses. Lifetime is presumed to be a period to the contractual maturity date of financial assets (the expected life of financial assets).

The Company determines, but are not limited to, whether the credit risk has increased significantly using the following.

- More than 30 days past due
- Classification of below precautionary in accordance with Regulations on Supervision of Banking Business
- Indicators of bad credit determined using the delinquency information and credit information of borrowers
- Seizure of deposits held by the borrower

After initial recognition, if estimated future cash flows of financial assets are affected a result of one or more of the following items, the Company deemed financial assets impaired:

- 90 days or more past due
- Financial assets classified as unprofitable loans
- Write-off or sales of financial assets resulting from deterioration of credit
- Decrease in debt due to debt restructuring
- Borrowers took bankruptcy or similar procedures to avoid, or postpone payments of loans
- Registration of borrowers on the overdue and bankruptcy information management list according to the general credit information management regulations of Credit Information Service
- Death of Borrowers

A. Forward-looking information

The Company reflects forward-looking information using information related to future economic conditions, when it measures the expected credit losses.

The Company assumes the risk component has a correlation with the economic cycle and calculates the expected credit loss by reflecting information related to the macroeconomic fluctuations on the risk components.

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The correlation between major macroeconomic variables and expected credit losses is as follows:

Major macroeconomic variables	Correlation
Rate of fluctuations in the price of housing	Negative (-) correlation
Rate of fluctuations in unemployment rate	Positive (+) correlation
Yield rate of government bond (3 years)	Positive (+) correlation

Macroeconomic variables used in calculation of expected credit loss are estimated in consideration of a variety of factors including adverse economic scenarios, statistics and forecasts of macroeconomic variables obtained from external institutions and others.

B. Measuring expected credit losses on financial assets at amortized cost

The expected credit losses on financial assets at amortized cost are measured as the difference between the asset's contractual terms of cash flow and the present value of estimated future cash flows discounted at the financial asset's original effective interest rate. The Company estimates expected future cash flows for financial assets that are individually significant (individual assessment of impairment).

For financial assets that are not individually significant, the Company collectively estimates expected credit loss by grouping loans with homogeneous credit risk profile (collective assessment of impairment).

Individual assessment of impairment

Individual assessment of impairment losses are calculated by discounting the expected future cash flows of a loan at its original effective interest rate and comparing the resultant present value with the loan's current carrying amount. This process normally encompasses management's best estimate, such as operating cash flow of the borrower and net realizable value of any collateral held.

Collective assessment of impairment

A methodology based on historical loss experience is used to estimate inherent incurred loss on groups of assets for collective assessment of impairment. Such methodology incorporates factors such as type of collateral, product and borrowers, credit rating, loss period, recovery period and applies probability of default on a group of assets and loss given default by type of recovery method. Also, consistent assumptions are applied to form a formula-based model in estimating inherent loss and to determine factors on the basis of historical loss experience and current condition. The methodology and assumptions used for collective assessment of impairment are reviewed regularly to reduce any differences between loss estimates and actual loss experience.

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C. Measuring expected credit losses on financial assets at fair value through other comprehensive income

A method of measurement of expected credit losses on financial assets at fair value through other comprehensive income is equal to the method of financial assets at amortized cost, except for changes in loss allowances that are recognized as other comprehensive income. Upon disposal or repayment of financial assets at fair value through other comprehensive income, the amount of loss allowances is reclassified from other comprehensive income to profit or loss.

3.4 Property and Equipment

Property and equipment are stated at historical cost less accumulated depreciation and accumulated impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Depreciation of all property and equipment, except for land, is calculated using the straight-line method to allocate their cost or revalued amounts, net of their residual values, over their estimated useful lives as follows:

	Estimated useful lives
Tools and equipment	5 years
Others	5 years

The residual value, the useful life and the depreciation method applied to an asset are reviewed at least at each financial year end and, if expectations differ from previous estimates or if there has been a significant change in the expected pattern of consumption of the future economic benefits embodied in the asset, the changes are accounted for as a change in an accounting estimate.

3.5 Intangible Assets

Intangible assets are measured initially at cost and subsequently carried at their cost less any accumulated amortization and any accumulated impairment losses.

Intangible assets are amortized using the straight-line method with no residual value over their estimated useful economic life since the asset is available for use.

	Estimated useful lives
Software	5 years
Development costs	5 years
Other intangible assets	5 years

The amortization period and the amortization method for intangible assets with a finite useful life

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are reviewed at least at each financial year end. Where an intangible asset is not being amortized because its useful life is considered to be indefinite, the Company carries out a review in each accounting period to confirm whether or not events and circumstances still support the assumption of an indefinite useful life. If they do not, the change from the indefinite to finite useful life is accounted for as a change in an accounting estimate.

Expenditures on research activities or the research phase of an internal project are recognized in profit or loss as incurred. Development expenditures are capitalized only if the Company can demonstrate the technical feasibility of completing the intangible asset, its intention and ability to complete the intangible asset and use or sell it, the availability of adequate resources and probable future economic benefits, and the expenditure attributable to the intangible asset during its development can be measured reliably. Other development expenditures are recognized in profit or loss as incurred.

3.6 Impairment of Non-financial Assets

Goodwill and intangible assets that have an indefinite useful life are not subject to amortization and are tested annually for impairment, or more frequently if events or changes in circumstances indicate that they might be impaired. Other assets are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at the end of each reporting period.

3.7 Financial Liabilities

In accordance with the substance of the contractual arrangement and the definitions of financial liabilities, the Company recognizes financial liabilities in the statement of financial position when the Company becomes a party to the contractual provisions of the financial liability. Transaction costs of financial liabilities at fair value through profit or loss are recognized in profit or loss.

3.7.1 Financial liabilities designated at fair value through profit or loss

The Company irrevocably designates certain financial liabilities upon initial recognition as at fair value through profit or loss when the designation eliminates or significantly reduces a measurement or recognition inconsistency (sometimes referred to as 'an accounting mismatch') that would otherwise arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases, or a group of financial liabilities or financial assets and financial liabilities is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy. The amount of the change in the fair value of financial liabilities at fair value through profit or loss that is attributable to changes in the credit risk is recognized in other comprehensive income.

3.7.2 Financial liabilities at fair value through profit or loss

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After initial recognition, financial liabilities at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss related to financial instrument at fair value through profit or loss.

3.7.3 Other financial liabilities

Non-derivative financial liabilities other than financial liabilities at fair value through profit or loss are classified as other financial liabilities. Other financial liabilities include deposits, debts, debentures and others. Upon of initial recognition, other financial liabilities are measured at fair value minus transaction costs that are directly attributable to the acquisition. Subsequent to initial recognition, other financial liabilities are measured at amortized cost using the effective interest method.

3.7.4 Derecognition of financial liabilities

Financial liabilities are derecognized from the statement of financial position when the obligation specified in contract is discharged, cancelled or expired.

3.8 Share Capital

Ordinary share and preferred share are classified as equity and the incremental costs arising directly attributable to the equity transactions less their tax effects are deducted from equity.

3.9 Leases

A lease is an agreement, whereby the lessor conveys to the lessee, in return for a payment or series of payments, the right to use an asset for an agreed period of time. Leases in which a significant portion of the risks and rewards of ownership are not transferred to the Company are classified as operating leases. Payments made under operating leases are charge to profit or loss on a straight-line basis over the period of lease.

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3.10 Employee Compensation and Benefits

3.10.1 Short-term employee benefits

Short-term employee benefits are employee benefits (other than termination benefits) that are due to be settled within 12 months after the end of the period in which the employees render the related service. The undiscounted amount of short-term employee benefits expected to be paid in exchange for that service is recognized as a liability (accrued expense), after deducting any amount already paid.

The expected cost of profit-sharing and bonus payments are recognized as liabilities when the Company has a present legal or constructive obligation to make such payments as a result of past events rendered by employees and a reliable estimate of the obligation can be made.

3.10.2 Other long-term employee benefits

The Company provides long-term employee benefits, which are entitled to employees who have been employed for longer than or equal to three years. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. The Company recognizes service cost, net interest on other long-term employee benefits and remeasurements as profit or loss for the year. These liabilities are measured annually by independent qualified actuaries.

3.10.3 Post-employment Benefits: Net defined benefit plan

Generally, post-employment benefits are payable after the completion of employment, and the benefit amount depended on the employee's age, periods of service or salary levels. The liability recognized in the statement of financial position in respect of net defined benefit plans is the present value of the net defined benefit obligation at the end of the reporting period less the fair value of plan assets. The net defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the net defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms approximating to the terms of the related obligation. Remeasurement gains and losses arising from experience adjustments and changes in actuarial assumptions are recognized in the period in which they occur, directly in other comprehensive income.

Changes in the present value of the net defined benefit obligation resulting from plan amendments or curtailments are recognized immediately in profit or loss as past service costs.

3.10.4 Post-employment Benefits: Defined contribution plan

For defined contribution plan, when an employee has rendered service to the Company during a period, the Company recognizes the contribution payable to a defined contribution plan in exchange for that service as profit or loss except in the case of their inclusion in the cost of an

asset.

3.11 Provisions

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The risks and uncertainties that inevitably surround many events and circumstances are taken into account in reaching the best estimate of a provision. Where the effect of the time value of money is material, provisions are determined at the present value of the expected future cash flows.

Provisions on unused credit lines of consumer and corporate loans are measured using a valuation model that applies the credit conversion factor, probability of default, loss given default and others.

Where some or all of the expenditures required to settle a provision are expected to be reimbursed by another party, the reimbursement shall be recognized when, and only when, it is virtually certain that reimbursement will be received if the entity settles the obligation. The reimbursement shall be treated as a separate asset.

Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimates. If it is no longer probable that an outflow of resources embodying economic benefits will be required to settle the obligation, the provision is reversed.

3.12 Revenue Recognition

The Company recognizes revenues in accordance with the following steps determined in accordance with Korean IFRS 1115 *Revenue from Contracts with Customers*.

- Step 1: Identify the contract with a customer.
- Step 2: Identify the performance obligations in the contract.
- Step 3: Determine the transaction price.
- Step 4: Allocate the transaction price to the performance obligations in the contract.
- Step 5: Recognize revenue when (or as) the entity satisfies a performance obligation.

3.12.1 Interest income and expenses

Interest income and expense are recognized using the effective interest method in the statements of comprehensive income. The effective interest method is a method of calculating the amortized cost of a financial asset or a financial liability and of allocating the interest income or interest expense over the relevant period.

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The effective interest rate is the rate that exactly discounts estimated future cash receipts or payments through the expected life of the financial instrument or, where appropriate, a shorter period, to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the Company estimates cash flows considering all contractual terms of the financial instrument but does not consider future credit losses. The calculation includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate, transaction costs, and all other premiums or discounts. In those rare cases when it is not possible to estimate reliably the cash flows or the expected life of a financial instrument (or group of financial instruments), the Company uses the contractual cash flows over the full contractual term of the financial instrument (or group of financial instruments).

Interest on impaired financial assets is recognized using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

3.12.2 Fee and commission Income

The Company recognizes financial service fees in accordance with the purpose of charging the fees and the accounting standard of the financial instrument related to the fees earned.

Fees that are a part of the effective interest of a financial instrument

The fees that are a part of the effective interest of a financial instrument include compensation for activities such as evaluating the borrower's financial condition, evaluating and recording guarantees, collateral and other security arrangements, negotiating the terms of the instrument, preparing and processing documents and closing the transaction, and origination fees received on issuing financial liabilities at amortized cost. Such fees are generally treated as adjustments of effective interest. However, fees relating to the creation or acquisition of a financial instrument at fair value through profit or loss are recognized as revenue immediately.

Fees related to performance obligations in the contract satisfied over time

As control over related goods and services of fees and commission income of performance obligation contracts transfer over time, commission income is recognized over the period of performance obligations. Fees and commission income, including asset management fees and commission fees are recognized as the related services are rendered.

Fees earned at a point in time

Fees earned at a point in time are recognized when a customer obtains controls of a promised asset and the Company satisfies a performance obligation. Commission on negotiation or participation in negotiation for the third party such as trading stocks or other securities, arranging transfer and acquisition of business is recognized as revenue when the transaction has been completed.

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3.12.3 Net gains/losses on financial instruments at fair value through profit or loss

Net gains/losses on financial instruments at fair value through profit or loss include profit or loss (including changes in fair value, dividends, and gain/loss from foreign currency translation) from following financial instruments:

- Gain or loss from financial instruments at fair value through profit or loss, excluding interest income calculated by the effective interest rate
- Gain or loss from derivatives for trading, including derivatives for hedging that does not meet the criteria for hedge accounting

3.12.4 Dividend income

Dividend income is recognized in profit or loss when the right to receive payment is established.

3.13 Income Tax Expenses

The tax expense for the period consists of current and deferred tax. Current and deferred tax is recognized in profit or loss, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity, respectively. The tax expense is measured at the amount expected to be paid to the taxation authorities, using the tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Deferred income tax is provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. However, deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss.

Deferred tax assets are recognized only if it is probable that future taxable amounts will be available to utilize those temporary differences and losses.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset where the entity has a legally enforceable right to offset and intends either to settle on a net basis.

3.14 Operating Segments

According to Korean IFRS 1108 *Operating Segments*, the Company omitted disclosure for operating segment as the Company has a single segment. The chief operating decision-maker is responsible for allocating resources and assessing performance of the operating

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segments and the Board of Directors that makes strategic decisions is considered as the chief operating decision-maker.

3.15 New standards and amendments Adopted by the Company

The Company has applied the following standards and amendments for the first time for their annual reporting period commencing January 1, 2018.

3.15.1 Korean IFRS 1109 *Financial Instruments*

The Company has applied Korean IFRS 1109 *Financial Instruments* on January 1, 2018, the date of initial application. In accordance with the transitional provisions in Korean IFRS 1109, comparative figures have not been restated, and the differences between previous carrying amounts and carrying amounts at the date of initial application are recognized in equity. See Note 29 for further details on the impact of the application of the standard.

3.15.2 Korean IFRS 1115 *Revenue from Contracts with Customers*

The Company has applied to apply Korean IFRS 1115 *Revenue from Contracts with Customers*. See Note 29 for further details on the impact of the application of the standard.

3.16 New standards and Interpretations not yet Adopted by the Company

The following new standards, interpretations and amendments to existing standards have been published and are mandatory for the Company for annual periods beginning on after January 1, 2018, and the Company has not early adopted them.

3.16.1 Korean IFRS 1116 *Leases*

Korean IFRS 1116 *Leases* issued on May 22, 2017 is effective for annual periods beginning on or after January 1, 2019, with early adoption permitted. This standard will replace Korean IFRS 1017 *Leases*, Interpretation 2104 *Determining whether an Arrangement contains a Lease*, Interpretation 2015 *Operating Leases-Incentives*, and Interpretation 2027 *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*.

At inception of a contract, the Company shall assess whether the contract is, or contains, a lease. Also, at the date of initial application, the Company shall assess whether the contract is, or contains, a lease in accordance with the standard. However, the Company will not need to reassess all contracts if the Company elected to apply the practical expedient not to apply the standard to contracts that were not previously identified as containing a lease applying K-IFRS 1017 and Interpretation 2104.

For a contract that is, or contains, a lease, the Company shall account for each lease component within the contract as a lease separately from non-lease components of the contract.

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A lessee is required to recognize a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments. The lessee may elect not to apply the requirements to short-term lease (a lease term of 12 months or less at the commencement date) and low value assets (e.g. underlying assets below \$ 5,000). In addition, as a practical expedient, the lessee may elect, by class of underlying asset, not to separate non-lease components from lease components, and instead account for each lease component and any associated non-lease components as a single lease component.

The accounting treatment as a lessor did not change significantly from the one under IAS 1017 *Leases*.

A lessee shall apply this standard to its leases either:

- retrospectively to each prior reporting period presented applying Korean IFRS 1008 *Accounting Policies, Changes in Accounting Estimates and Errors* (Full retrospective application); or
- retrospectively with the cumulative effect of initially applying the standard recognized at the date of initial application.

The Company plans to apply Korean IFRS 1116 retrospectively with the cumulative effect of initially applying the standard as at January 1, 2019. The Company will not restate any comparative information. Instead, the cumulative effect of applying the standard will be recognized as an adjustment to the opening balance of retained earnings (or another component of equity, as appropriate) at the date of initial application.

The Company performed an impact assessment to identify potential financial effects of applying Korean IFRS 1116. The assessment was performed based on available information as at December 31, 2018, to identify effects on 2019 financial statements.

The total minimum lease payment expected to be paid by the Company in relation to operating leases before discounted to their present value is ₩ 15,035,345,429. When the payment is discounted at incremental borrowing rate of the lessee, the total minimum lease payment amounts to ₩ 14,541,288,904.

For a contract that is, or contains, a lease, the Company plans to apply the practical expedient to account for each lease component and any associated non-lease components as a single lease component.

As a result of the financial effects on the financial statements analyzed, the Company expects the underlying leased asset and a lease liability as at January 1, 2019 to be increased by ₩ 15,674,709,633 and ₩14,541,288,904, respectively. On the other hand, the results of the assessment may change due to additional information that the Company may obtain after the assessment.

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3.16.2 Korean IFRS 1109 *Financial Instruments*

The narrow-scope amendments made to Korean IFRS 1109 *Financial Instruments* enable entities to measure certain prepayable financial assets with negative compensation at amortized cost. When a modification of a financial liability measured at amortized cost that does not result in the derecognition, a modification gain or loss shall be recognized in profit or loss. These amendments will be applied for annual periods beginning on or after January 1, 2019, with early adoption permitted.

The Company does not expect the application of Korean IFRS 1109 to have a significant impact on financial statements.

3.16.3 Amendments to Korean IFRS 1019 *Employee Benefits*

The amendments require that an entity shall calculate current service cost and net interest for the remainder of the reporting period after a plan amendment, curtailment or settlement based on updated actuarial assumptions from the date of the change. The amendments also require that a reduction in a surplus must be recognized in profit or loss even if that surplus was not previously recognized because of the impact of the asset ceiling. The amendments are effective for plan amendments, curtailments and settlements occurring in reporting periods that begin on or after January 1, 2019.

The Company does not expect the application of Korean IFRS 1019 to have a significant impact on financial statements.

3.16.4 Enactment to Interpretation of Korean IFRS 2123 *Uncertainty over Income Tax Treatments*

The Interpretation explains how to recognize and measure deferred and current income tax assets and liabilities where there is uncertainty over a tax treatment, and includes guidance on how to determine whether each uncertain tax treatment is considered separately or together. It also presents examples of circumstances where a judgement or estimate is required to be reassessed. This Interpretation will be applied for annual periods beginning on or after January 1, 2019, and an entity can either restate the comparative financial statements retrospectively or recognize the cumulative effect of initially applying the Interpretation as an adjustment in the beginning balance at the date of initial application.

The Company does not expect the application of Korean IFRS 2123 to have a significant impact on financial statements.

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4. Cash and Due from Financial Institutions

Details of cash and due from financial institutions as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018		2017	
Cash and cash equivalents				
Cash	₩	1,845,511,000	₩	1,000,000,000
Demand deposits		-		2,431,400
		<u>1,845,511,000</u>		<u>1,002,431,400</u>
Due from financial institutions in Korean won				
Time deposits		767,381,970		571,224,694
Reserve deposits		1,636,358,633,587		420,279,935,181
Other deposits		1,500,000,000		1,500,000,000
		<u>1,638,626,015,557</u>		<u>422,351,159,875</u>
	₩	<u>1,640,471,526,557</u>	₩	<u>423,353,591,275</u>

Restricted deposits as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	Financial Institutions	2018		2017		Reason for restriction
Due from financial institutions in Korean won						
Time deposits	Woori Bank	₩	767,381,970	₩	571,224,694	Pledged as head office rental deposit
Reserve deposits	Bank of Korea		1,636,358,633,587		420,279,935,181	Settlement risk of Bank of Korea
Other deposits	Kyongnam Bank		1,500,000,000		1,500,000,000	Settlement collateral for local tax collection in Seoul
		₩	<u>1,638,626,015,557</u>	₩	<u>422,351,159,875</u>	

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5. Financial Investments

Details of financial investments as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Financial assets at fair value through other comprehensive income		
(2017: Available-for-sale financial assets)		
Debt securities		
Government bonds	₩ 173,999,208,327	₩ 69,809,358,304
Financial bonds	230,065,883,560	189,105,957,776
Corporate bonds	29,975,097,459	50,029,127,459
	<u>434,040,189,346</u>	<u>308,944,443,539</u>
Financial assets at amortized cost		
(2017: Held-to-maturity financial assets)		
Debt securities		
Government bonds	425,796,123,336	89,345,977,551
Financial bonds	10,000,350,448	10,004,300,877
Corporate bonds	229,865,563,281	115,354,101,678
	<u>665,662,037,065</u>	<u>214,704,380,106</u>
	<u>₩ 1,099,702,226,411</u>	<u>₩ 523,648,823,645</u>

There is no impairment loss on financial investments for the year ended December 31, 2018 and 2017.

6. Loans

Details of loans as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Loans	₩ 9,082,589,669,163	₩ 4,621,831,541,158
Deferred loan origination fees and costs	31,718,726,758	18,091,415,358
	9,114,308,395,921	4,639,922,956,516
Less: Allowances for loan losses	(32,210,147,308)	(18,266,920,344)
	<u>₩ 9,082,098,248,613</u>	<u>₩ 4,621,656,036,172</u>

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Changes in the allowances for loan losses for the periods ended December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Beginning balance	₩ 18,266,920,344	₩ -
Amounts restated through beginning balance of retained earnings ¹	367,275,141	-
Provision	14,771,252,746	18,266,920,344
Written-off	(1,127,581,017)	-
Unwinding Effect	(77,343,147)	-
Others	9,623,241	-
Ending balance	<u>₩ 32,210,147,308</u>	<u>₩ 18,266,920,344</u>

¹The effects of adoption of Korean IFRS 1109

Changes in the deferred loan origination fees and costs for the periods ended December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Beginning balance	₩ 18,091,415,358	₩ -
Increase	44,265,318,640	25,035,331,540
Decrease	30,638,007,240	6,943,916,182
Ending balance	<u>₩ 31,718,726,758</u>	<u>₩ 18,091,415,358</u>

KakaoBank of Korea Corp.
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7. Property and Equipment

Details of property and equipment as at December 31, 2018 and 2017, are as follows:

(in Korean won)

	2018		
	Acquisition cost	Accumulated depreciation	Carrying amount
Tools and equipment	₩ 38,641,912,546	₩ (10,095,065,675)	₩ 28,546,846,871
Others	5,122,612,617	(1,648,823,613)	3,473,789,004
	<u>₩ 43,764,525,163</u>	<u>₩ (11,743,889,288)</u>	<u>₩ 32,020,635,875</u>

(in Korean won)

	2017		
	Acquisition cost	Accumulated depreciation	Carrying amount
Tools and equipment	₩ 32,047,659,057	₩ (3,092,446,598)	₩ 28,955,212,459
Others	4,426,142,543	(716,578,575)	3,709,563,968
	<u>₩ 36,473,801,600</u>	<u>₩ (3,809,025,173)</u>	<u>₩ 32,664,776,427</u>

Changes in property and equipment for the periods ended December 31, 2018 and 2017, are as follows:

(in Korean won)

	2018				
	Beginning balance	Acquisitions	Depreciation	Others¹	Ending balance
Tools and equipment	₩ 28,955,212,459	₩ 6,594,253,489	₩ (7,002,619,077)	₩ -	₩ 28,546,846,871
Others	3,709,563,968	522,399,000	(932,245,038)	174,071,074	3,473,789,004
	<u>₩ 32,664,776,427</u>	<u>₩ 7,116,652,489</u>	<u>₩ (7,934,864,115)</u>	<u>₩ 174,071,074</u>	<u>₩ 32,020,635,875</u>

(in Korean won)

	2017				
	Beginning balance	Acquisitions	Depreciation	Others¹	Ending balance
Tools and equipment	₩ 4,483,301,155	₩ 27,269,342,676	₩ (2,797,431,372)	₩ -	₩ 28,955,212,459
Others	1,261,379,766	1,951,704,720	(529,516,170)	1,025,995,652	3,709,563,968
	<u>₩ 5,744,680,921</u>	<u>₩ 29,221,047,396</u>	<u>₩ (3,326,947,542)</u>	<u>₩ 1,025,995,652</u>	<u>₩ 32,664,776,427</u>

¹Increase due to transfer of provision for asset retirement obligation and changes in the discount rate.

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8. Intangible Assets

Details of intangible assets as at December 31, 2018 and 2017, are as follows:

(in Korean won)

	2018		
	Acquisition cost	Accumulated amortization	Carrying amount
Development costs	₩ 63,771,701,202	₩ (17,800,687,325)	₩ 45,971,013,877
Software	17,492,207,427	(5,843,619,018)	11,648,588,409
Other intangible assets	6,568,098,710	(11,239,478)	6,556,859,232
	<u>₩ 87,832,007,339</u>	<u>₩ (23,655,545,821)</u>	<u>₩ 64,176,461,518</u>

(in Korean won)

	2017		
	Acquisition cost	Accumulated amortization	Carrying amount
Development costs	₩ 62,182,924,664	₩ (5,121,665,449)	₩ 57,061,259,215
Software	16,250,466,384	(2,512,247,145)	13,738,219,239
Other intangible assets	6,568,098,710	(5,619,734)	6,562,478,976
	<u>₩ 85,001,489,758</u>	<u>₩ (7,639,532,328)</u>	<u>₩ 77,361,957,430</u>

Changes in intangible assets for the periods ended December 31, 2018 and 2017, are as follows:

(in Korean won)

	2018			
	Beginning balance	Acquisitions	Amortization	Ending balance
Development costs	₩ 57,061,259,215	₩ 1,588,776,538	₩ (12,679,021,876)	₩ 45,971,013,877
Software	13,738,219,239	1,241,741,043	(3,331,371,873)	11,648,588,409
Other intangible assets	6,562,478,976	-	(5,619,744)	6,556,859,232
	<u>₩ 77,361,957,430</u>	<u>₩ 2,830,517,581</u>	<u>₩ (16,016,013,493)</u>	<u>₩ 64,176,461,518</u>

(in Korean won)

	2017			
	Beginning balance	Acquisitions	Amortization	Ending balance
Development costs	₩ 249,108,916	₩ 61,929,593,564	₩ (5,117,443,265)	₩ 57,061,259,215
Software	5,850,949,487	9,779,473,323	(1,892,203,571)	13,738,219,239
Other intangible assets	-	6,568,098,710	(5,619,734)	6,562,478,976
	<u>₩ 6,100,058,403</u>	<u>₩ 78,277,165,597</u>	<u>₩ (7,015,266,570)</u>	<u>₩ 77,361,957,430</u>

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9. Other Assets

Details of other assets as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Other financial assets		
Other receivables	₩ 102,777,783	₩ 123,982,418
Accrued income	30,204,144,517	11,394,262,477
Guarantee deposits	3,449,322,870	2,640,246,994
Domestic exchange settlement debits	166,953,518,817	143,939,841,102
Financial suspense payments	9,292,610	791,446
Security deposits	5,500,000	-
Less: Allowances for loan losses	(67,320,279)	(38,873,863)
Present value discount	(141,513,621)	(118,798,251)
	<u>200,515,722,697</u>	<u>157,941,452,323</u>
Other assets		
Prepaid expenses	2,518,716,837	1,637,499,523
Others	2,972,829,825	3,173,404,178
	<u>5,491,546,662</u>	<u>4,810,903,701</u>
	<u>₩ 206,007,269,359</u>	<u>₩ 162,752,356,024</u>

Changes in allowances for losses on other assets for the periods ended December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Beginning balance	₩ 38,873,863	₩ -
Amounts restated through beginning balance of retained earnings ¹	849,568	-
Provisions	29,247,137	38,873,863
Reversal	-	-
Written-off	(1,650,289)	-
Ending balance	<u>₩ 67,320,279</u>	<u>₩ 38,873,863</u>

¹The effects of adoption of Korean IFRS 1109

KakaoBank of Korea Corp.
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10. Assets Pledged as Collateral and Provided as Collateral

Details of assets pledged as collateral as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017	Reason for the pledged
Securities			
Financial assets at amortized cost (2017: Held-to-maturity financial assets)	₩ 245,627,261,412	₩ 109,841,914,826	Settlement risk of Bank of Korea

As at December 31, 2018 and 2017, there is no collateral provided.

11. Deposits

Details of deposits as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Demand deposits		
Demand deposits in Korean won	₩ 3,494,859,234,318	₩ 1,646,184,232,048
Time deposits		
Time deposits in Korean won	7,316,768,600,955	3,402,115,468,709
	<u>₩ 10,811,627,835,273</u>	<u>₩ 5,048,299,700,757</u>

12. Net Defined Benefit Assets and Liabilities

The Company operates net defined benefit plans based on the service period of employees.

Details of net defined benefit liabilities (assets) recognized in the statements of financial position as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Present value of defined benefit obligations	₩ 5,149,179,017	₩ 2,223,088,595
Fair value of plan assets	4,557,027,161	2,613,823,209
Net defined benefit liabilities (assets) ¹	<u>₩ 592,151,856</u>	<u>₩ (390,734,614)</u>

¹ The amount of the surplus of plan asset is similar to the expected value of economic benefit available of surplus, the asset ceiling is not recognized.

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Changes in the net defined benefit obligations for the periods ended December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018		2017	
Beginning balance	₩	2,223,088,595	₩	648,158,165
Current service cost		1,912,097,952		1,689,859,926
Interest expense		78,604,152		20,585,496
Remeasurements ¹		1,138,620,965		(84,890,070)
Payments		(203,232,647)		(50,624,922)
Ending balance	₩	<u>5,149,179,017</u>	₩	<u>2,223,088,595</u>

¹ As at December 31, 2018, remeasurements consist of actuarial loss from change in financial assumptions of ₩ 254,977,393 and actuarial loss from experience adjustments of ₩ 883,643,572.

Changes in the fair value of plan assets for the periods ended December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018		2017	
Beginning balance	₩	2,613,823,209	₩	-
Expected returns		93,308,064		-
Remeasurements		(38,353,331)		8,809,351
Contributions of employer		2,060,000,000		2,655,638,780
Payments		(171,750,781)		(50,624,922)
Ending balance	₩	<u>4,557,027,161</u>	₩	<u>2,613,823,209</u>

Plan assets as at December 31, 2018 and 2017, consist of:

<i>(in Korean won)</i>	2018		2017	
	Assets quoted in an active market	Assets not quoted in an active market	Assets quoted in an active market	Assets not quoted in an active market
ELB of NH Investment & Securities Co.,Ltd.	₩	-	₩	4,557,018,181
Cash equivalents		8,980		-
	₩	<u>-</u>	₩	<u>2,613,819,951</u>
		<u>₩ 4,557,027,161</u>		<u>₩ 3,258</u>
	₩	<u>-</u>	₩	<u>2,613,823,209</u>

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The significant actuarial assumptions as at December 31, 2018 and 2017, are as follows:

<i>(in percentage, %)</i>	2018	2017	
Discount rate (expected yield)	3.20	3.76	High-quality corporate bonds
Salary growth rate	2.00	2.00	Standard rate announced by Korea Insurance Development Institute

The sensitivity of the present value of defined benefit obligation to changes in the principal assumptions is:

<i>(in Korean won)</i>	2018	2017
Discount rate		
1% point increase	₩ (435,758,398)	₩ (178,985,063)
1% point decrease	506,729,753	207,709,093

<i>(in Korean won)</i>	2018	2017
Salary growth rate		
1% point increase	₩ 508,284,431	₩ 209,587,360
1% point decrease	(444,873,824)	(183,668,861)

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Expected maturity analysis of undiscounted pension benefits as at December 31, 2018 and 2017, is as follows:

<i>(in Korean won)</i>	2018					
	Less than 1 year	Between 1-2 years	Between 2-5 years	Between 5-10 years	Over 10 years	Total
Pension benefits	₩ 541,911,949	₩ 801,942,543	₩ 3,450,726,904	₩ 8,568,021,476	₩ 45,214,024,959	₩ 58,576,627,831

<i>(in Korean won)</i>	2017					
	Less than 1 year	Between 1-2 years	Between 2-5 years	Between 5-10 years	Over 10 years	Total
Pension benefits	₩ 269,245,962	₩ 503,821,350	₩ 1,932,234,510	₩ 5,029,405,684	₩ 27,292,821,746	₩ 35,027,529,252

The weighted average duration of the net defined benefit obligation for the periods ended December 31, 2018 and 2017 is 9.40 years and 9.31 years, respectively.

Expected contributions to plan assets for the period after December 31, 2018, is estimated to be approximately ₩ 3,793,861,212.

13. Provisions

Details of provisions as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Provisions for asset retirement obligation	₩ 1,679,961,226	₩ 1,449,508,108
Provisions for unused loan commitments	3,001,695,575	3,846,352,748
Long-term employee benefits	3,405,337,719	1,633,918,122
	<u>₩ 8,086,994,520</u>	<u>₩ 6,929,778,978</u>

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Changes in provisions for the periods ended December 31, 2018 and 2017, are as follows:

(in Korean won)

	2018			
	Provisions for asset retirement obligation ¹	Provisions for unused loan commitments	Long-term employee benefits	Total
Beginning balance	₩ 1,449,508,108	₩ 3,846,352,748	₩ 1,633,918,122	₩ 6,929,778,978
Amounts restated through beginning balance of retained earnings ²	-	76,544,174	-	76,544,174
Unwinding of discount	56,382,044	-	-	56,382,044
Effect of changes in discount rate	52,731,571	-	-	52,731,571
Provisions	121,339,503	-	1,821,419,597	1,942,759,100
Reversal	-	(921,201,347)	-	(921,201,347)
Used during year	-	-	(50,000,000)	(50,000,000)
Ending balance	₩ 1,679,961,226	₩ 3,001,695,575	₩ 3,405,337,719	₩ 8,086,994,520

(in Korean won)

	2017			
	Provisions for asset retirement obligation ¹	Provisions for unused loan commitments	Long-term employee benefits	Total
Beginning balance	₩ 392,014,124	₩ -	₩ -	₩ 392,014,124
Unwinding of discount	31,498,332	-	-	31,498,332
Effect of changes in discount rate	18,629,147	-	-	18,629,147
Provisions	1,007,366,505	3,846,352,748	1,633,918,122	6,487,637,375
Ending balance	₩ 1,449,508,108	₩ 3,846,352,748	₩ 1,633,918,122	₩ 6,929,778,978

¹ Provisions for asset retirement obligation are present value of estimated costs to be incurred for asset retirement obligation of the leased properties. Actual expenses are expected to be incurred at the end of each lease contract and five years of depreciation period of leased properties are used as discount period.

² The effects of adoption of Korean IFRS 1109

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14. Other Liabilities

Details of other liabilities as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Other financial liabilities		
Other payables	₩ 83,120,965,134	₩ 67,220,459,636
Accrued expenses	56,441,471,553	14,861,798,622
Domestic exchange settlement credits	22,141,937,901	35,652,895,295
Liabilities incurred from agency relationship	1,985,028,476	444,142,542
Others	38,861	495,706
	<u>163,689,441,925</u>	<u>118,179,791,801</u>
Other liabilities		
Unearned revenue	144,358,029	67,440,192
Withholding taxes	2,163,828,285	865,908,020
Others	10,461,700	5,357,900
	<u>2,318,648,014</u>	<u>938,706,112</u>
	<u>₩ 166,008,089,939</u>	<u>₩ 119,118,497,913</u>

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15. Equity

Details of equity as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Share capital		
Ordinary shares	₩ 1,000,000,000,000	₩ 800,000,000,000
Preferred shares	300,000,000,000	-
Capital adjustments		
Discount on share issuance	(18,738,752,740)	(11,534,296,500)
Accumulated other comprehensive income		
Gain (loss) on valuation of financial assets at fair value through other comprehensive income (2017: Changes in the fair value of available-for-sale financial assets)	1,183,485,779	(889,211,873)
Remeasurements of net defined benefit liability (asset)	(844,954,402)	73,085,548
Accumulated deficit		
Accumulated deficit before appropriation	(141,192,037,122)	(119,792,802,456)
	<u>₩ 1,140,407,741,515</u>	<u>₩ 667,856,774,719</u>

Details of share capital as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won, in shares)</i>	2018		2017	
	Ordinary shares	Preferred shares	Ordinary shares	Preferred shares
Number of shares authorized	800,000,000		400,000,000	
Par value	₩ 5,000		₩ 5,000	
Number of shares issued	200,000,000	60,000,000	160,000,000	-
Share capital	<u>₩ 1,000,000,000,000</u>	<u>₩ 300,000,000,000</u>	<u>₩ 800,000,000,000</u>	<u>₩ -</u>

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Changes in accumulated other comprehensive income for the periods ended December 31, 2018 and 2017, are as follows:

(in Korean won)	2018		2017	
	Gain (loss) on valuation of financial assets at fair value through other comprehensive income	Remeasurements of net defined benefit liability (asset)	Changes in the fair value of available-for-sale financial assets	Remeasurements of net defined benefit liability (asset)
Beginning balance	₩ (889,211,873)	₩ 73,085,548	₩ -	₩ -
Increase (decrease) due to fair value measurement	2,563,934,738	(1,176,974,296)	(1,140,015,222)	93,699,421
Increase due to disposal	93,369,944	-	-	-
Tax effect	(584,607,030)	258,934,346	250,803,349	(20,613,873)
Ending balance	<u>₩ 1,183,485,779</u>	<u>₩ (844,954,402)</u>	<u>₩ (889,211,873)</u>	<u>₩ 73,085,548</u>

The disposition of accumulated deficit for the year ended December 31, 2018, is expected to be disposed at the shareholders' meeting on March 25, 2019. The disposition date for the year ended December 31, 2017, was March 22, 2018.

The disposition of accumulated deficit for the periods ended December 31, 2018 and 2017, is as follows:

(in Korean won)	2018	2017
Undisposed accumulated deficit carried over from prior year	₩ (119,792,802,456)	₩ (15,301,767,185)
Loss for the period	(20,954,565,783)	(104,491,035,271)
Effects of changes in accounting policies	(444,668,883)	-
Disposition of accumulated deficit	-	-
Undisposed accumulated deficit to be carried forward	<u>₩ (141,192,037,122)</u>	<u>₩ (119,792,802,456)</u>

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16. Net Interest Income and Expenses

Details of interest income and expenses for the periods ended December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Interest income		
Due from financial institutions	₩ 643,130,689	₩ 819,098,518
Loans	271,281,940,134	45,937,599,629
Financial investments	21,282,473,166	3,441,681,003
Others	724,740,430	127,036,018
	<u>293,932,284,419</u>	<u>50,325,415,168</u>
Interest expenses		
Deposits	110,415,175,788	17,700,223,519
Debts	50,994,514	51,876,708
Others	72,387,544	71,036,258
	<u>110,538,557,846</u>	<u>17,823,136,485</u>
	<u>₩ 183,393,726,573</u>	<u>₩ 32,502,278,683</u>

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17. Fee and Commission Income and Expenses

Fee and commission income and expenses for the periods ended December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Fee and commission income		
Remittance related fees	₩ 1,649,898,400	₩ 392,543,100
Card related fees	62,327,806,102	15,693,478,446
Electronic finance related fees	1,946,843,796	789,135,003
Firm banking related fees	1,772,901,231	-
Others	228,899,950	119,863,788
	<u>67,926,349,479</u>	<u>16,995,020,337</u>
Fee and commission expenses		
Lending activity related fees	5,036,776,635	976,898,693
Card activity related fees	79,004,011,473	39,674,578,399
Deposit activity related fees	11,979,000	660,000
Electronic finance related fees	869,045,600	796,907,000
CD/ATM fees	31,829,680,110	5,891,829,190
Stamp taxes	1,922,426,200	4,916,086,100
Others	8,948,041,685	2,997,590,290
	<u>127,621,960,703</u>	<u>55,254,549,672</u>
	<u>₩ (59,695,611,224)</u>	<u>₩ (38,259,529,335)</u>

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18. Selling and Administrative Expenses

Details of selling and administrative expenses for the periods ended December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018		2017	
Employee benefits				
Short-term employee benefits	₩	37,444,032,856	₩	21,102,676,533
Long-term employee benefits		1,821,419,597		1,633,918,122
Post-employment benefits- defined benefit plan		1,897,394,040		1,710,445,422
Post-employment benefits- defined contribution plan		146,250,000		40,062,910
		<u>41,309,096,493</u>		<u>24,487,102,987</u>
Depreciation		7,934,864,115		3,326,947,542
Amortization		16,016,013,493		7,015,266,570
Other administrative expenses				
Welfare expenses		7,818,838,927		4,646,485,356
Rental expenses		6,543,769,686		4,311,851,687
Advertising expenses		15,355,909,362		12,984,229,522
Computer operation expenses		14,234,323,924		9,664,565,973
Taxes and dues		3,805,634,700		973,388,112
Travel expenses		262,031,786		310,169,337
Communication expenses		1,519,483,820		1,352,972,933
Supplies expenses		560,984,599		750,639,971
Service contract expenses		13,009,958,778		4,752,531,209
Others		1,436,990,390		798,016,154
		<u>64,547,925,972</u>		<u>40,544,850,254</u>
	₩	<u>129,807,900,073</u>	₩	<u>75,374,167,353</u>

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19. Other Operating Income and Expenses

Details of other operating income and expenses for the periods ended December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018		2017	
Other operating income				
Gain on foreign exchange transactions	₩	1,972,393,256	₩	497,010,636
Reversal of provisions for unused loan commitments		921,201,347		-
Others		5,338,549		100,000
	₩	<u>2,898,933,152</u>	₩	<u>497,110,636</u>
Other operating expenses				
Deposit insurance expenses	₩	13,282,752,000	₩	2,491,536,000
Provisions for unused loan commitments		-		3,846,352,748
Others		738,556,722		21,278,687
	₩	<u>14,021,308,722</u>	₩	<u>6,359,167,435</u>

20. Non-operating Income and Expenses

Details of non-operating income and expenses for the periods ended December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018		2017	
Other operating income				
Others	₩	14,692,184	₩	9,667,075
Other operating expenses				
Donation	₩	61,410,000	₩	28,152,000
Others		24,802,950		7,442,946
	₩	<u>86,212,950</u>	₩	<u>35,594,946</u>

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21. Financial Instruments by Category

Carrying amounts of financial assets and liabilities by category as at December 31, 2018 and 2017, are as follows:

(in Korean won)

	2018			
	Financial assets at fair value through other comprehensive income	Financial assets at amortized cost	Financial liabilities at amortized cost	Total
Financial assets				
Cash and due from financial institutions	₩ -	₩ 1,640,471,526,557	₩ -	₩ 1,640,471,526,557
Financial investments	434,040,189,346	665,662,037,065	-	1,099,702,226,411
Loans	-	9,082,098,248,613	-	9,082,098,248,613
Other financial assets	-	200,515,722,697	-	200,515,722,697
	<u>₩ 434,040,189,346</u>	<u>₩ 11,588,747,534,932</u>	<u>₩ -</u>	<u>₩ 12,022,787,724,278</u>
Financial liabilities				
Deposits	₩ -	₩ -	₩ 10,811,627,835,273	₩ 10,811,627,835,273
Other financial liabilities	-	-	163,689,441,925	163,689,441,925
	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 10,975,317,277,198</u>	<u>₩ 10,975,317,277,198</u>

(in Korean won)

	2017				
	Available-for-sale financial assets	Held-to-maturity financial assets	Loans and receivables	Financial liabilities at amortized cost	Total
Financial assets					
Cash and due from financial institutions	₩ -	₩ -	₩ 423,353,591,275	₩ -	₩ 423,353,591,275
Financial investments	308,944,443,539	214,704,380,106	-	-	523,648,823,645
Loans	-	-	4,621,656,036,172	-	4,621,656,036,172
Other financial assets	-	-	157,941,452,323	-	157,941,452,323
	<u>₩ 308,944,443,539</u>	<u>₩ 214,704,380,106</u>	<u>₩ 5,202,951,079,770</u>	<u>₩ -</u>	<u>₩ 5,726,599,903,415</u>
Financial liabilities					
Deposits	₩ -	₩ -	₩ -	₩ 5,048,299,700,757	₩ 5,048,299,700,757
Other financial liabilities	-	-	-	118,179,791,801	118,179,791,801
	<u>₩ -</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 5,166,479,492,558</u>	<u>₩ 5,166,479,492,558</u>

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Net gains or losses on each category of financial instruments for the periods ended December 31, 2018 and 2017, are as follows:

		2018										
		Net interest income (expense)	Net fee and commission income (expense)	Provision for credit losses	Others	Total	Other comprehensive income(loss)					
(in Korean won)												
Financial assets												
Financial assets at fair value through profit or loss	₩	-	₩	-	₩	10,077,424,249	₩	10,077,424,249	₩	-		
Financial assets at fair value through other comprehensive income		9,383,637,091		-		746,518,227		10,130,155,318		2,072,697,652		
Financial assets at amortized cost		284,548,647,328		(507,093,799)		(14,800,499,883)		-		269,241,053,646	-	
		<u>₩ 293,932,284,419</u>		<u>₩ (507,093,799)</u>		<u>₩ (14,800,499,883)</u>		<u>₩ 10,823,942,476</u>		<u>₩ 289,448,633,213</u>	<u>₩ 2,072,697,652</u>	
Financial liabilities												
Financial liabilities at amortized cost	₩	(110,482,175,802)	₩	(746,560,200)	₩	-	₩	-	₩	(111,228,736,002)	₩	-
(in Korean won)												
		2017										
		Net interest income (expense)	Net fee and commission income (expense)	Provision for credit losses	Others	Total	Other comprehensive income(loss)					
Financial assets												
Available-for- sale financial assets	₩	2,271,377,185	₩	-	₩	-	₩	1,090,963,422	₩	3,362,340,607	₩	(889,211,873)
Held-to-maturity financial assets		1,170,303,818		-		-		-		1,170,303,818		-
Loans and receivables		46,883,734,165		(1,722,828,693)		(18,305,794,207)		-		26,855,111,265		-
		<u>₩ 50,325,415,168</u>		<u>₩ (1,722,828,693)</u>		<u>₩ (18,305,794,207)</u>		<u>₩ 1,090,963,422</u>		<u>₩ 31,387,755,690</u>		<u>₩ (889,211,873)</u>
Financial liabilities												
Financial liabilities at amortized cost	₩	(17,791,638,153)	₩	(640,977,100)	₩	-	₩	-	₩	(18,432,615,253)	₩	-

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22. Tax Expense and Deferred Tax

Income tax expense for the periods ended December 31, 2018 and 2017, consists of:

<i>(in Korean won)</i>	2018	2017
Current tax	₩ -	₩ -
Changes in deferred tax due to temporary differences ¹	-	26,612,335
Income tax recognized directly in equity	<u>(325,672,684)</u>	<u>230,189,476</u>
Income tax expense (income)	<u>₩ (325,672,684)</u>	<u>₩ 256,801,811</u>

¹ No deferred tax assets have been recognized, due to the uncertainty of realization.

An analysis of the net loss before income tax and income tax expense (revenue) for the periods ended December 31, 2018 and 2017, is as follows:

<i>(in Korean won)</i>	2018	2017
Loss before income tax expense	₩ (21,280,238,467)	₩ (104,234,233,460)
Tax at the applicable tax rate ¹	(4,687,817,709)	(24,762,684,497)
Non-taxable income	(97,827,405)	-
Non-deductible expense	60,162,290	5,185,638
Other adjustments	4,399,810,140	25,014,300,670
Unrecognized deferred tax asset	4,488,634,422	23,334,140,996
Effect of tax rate and others	<u>(88,824,282)</u>	<u>1,680,159,674</u>
Income tax expense (income)	<u>₩ (325,672,684)</u>	<u>₩ 256,801,811</u>
Average effective tax rate (%)	-	-

¹ Applicable tax rate for ₩ 200 million and below is 11%, for over ₩ 200 million to ₩ 20 billion is 22%, and for over ₩ 20 billion is 24.2%.

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The movements of temporary differences and deferred tax assets (liabilities) for the periods ended and as at December 31, 2018 and 2017, are as follows:

(in Korean won)

	2018			
	Beginning balance	Profit or loss	Other comprehensive income (capital adjustments)	Ending balance
Temporary differences				
Provisions for asset retirement obligation	₩ 61,891,868	₩ 75,952,739	₩ -	₩ 137,844,607
Post-employment pension	(85,961,615)	(42,699,323)	258,934,346	130,273,408
Accrued interest	(471,402,066)	(1,356,467,563)	-	(1,827,869,629)
Leasehold guarantee deposits	26,135,615	4,997,382	-	31,132,997
Prepaid rent	(26,135,615)	(4,997,382)	-	(31,132,997)
Provisions for unused loan commitments	1,205,659,591	203,887,734	-	1,409,547,325
Financial assets at fair value through other comprehensive income (gain (loss) on valuation)	250,803,349	-	(584,607,030)	(333,803,681)
Financial assets at fair value through other comprehensive income (Interest amortization)	57,629,015	26,539,284	-	84,168,299
Financial assets at amortized cost (Interest amortization)	9,194,167	(398,314,299)	-	(389,120,132)
Unused annual leave	35,413,984	41,381,693	-	76,795,677
Accrued expenses (service contract expenses)	(19,515,096)	19,515,096	-	-
Reversal of regular welfare expense	116,405	61,186	-	177,591
Legal fiction of instant depreciation	4,213,042	9,069,900	-	13,282,942
Deferred incentive bonuses for executive	-	67,138,500	-	67,138,500
Deferred loan origination costs	-	(59,426,932)	-	(59,426,932)
	<u>1,048,042,644</u>	<u>(1,413,361,985)</u>	<u>(325,672,684)</u>	<u>(690,992,025)</u>
Tax losses	24,940,161,594	6,119,169,363	-	31,059,330,957
Unused tax credit	159,626,206	108,499,728	-	268,125,934
	<u>25,099,787,800</u>	<u>6,227,669,091</u>	<u>-</u>	<u>31,327,456,891</u>
	<u>₩ 26,147,830,444</u>	<u>₩ 4,814,307,106</u>	<u>₩ (325,672,684)</u>	<u>₩ 30,636,464,866</u>
Amount excluded in recognition of deferred tax assets (liabilities) ¹	₩ 26,147,830,444	₩ 4,488,634,422	₩ -	₩ 30,636,464,866
Amount included in recognition of deferred tax assets (liabilities)	₩ -	₩ 325,672,684	₩ (325,672,684)	₩ -

¹ No deferred tax assets have been recognized, due to the uncertainty of realization.

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	2017			
	Beginning balance	profit or loss	Other comprehensive income (capital adjustments)	Ending balance
Temporary differences				
Provisions for asset retirement obligation	₩ 17,983,177	₩ 43,908,691	₩ -	₩ 61,891,868
Post-employment pension	156,854,276	(222,202,018)	(20,613,873)	(85,961,615)
Accrued interest	(148,225,118)	(323,176,948)	-	(471,402,066)
Leasehold guarantee deposits	15,280,765	10,854,850	-	26,135,615
Prepaid rent	(15,280,765)	(10,854,850)	-	(26,135,615)
Provisions for unused loan commitments	-	1,205,659,591	-	1,205,659,591
Available-for-sale financial assets (gain (loss) on valuation)	-	-	250,803,349	250,803,349
Available-for-sale financial assets (Interest amortization)	-	57,629,015	-	57,629,015
Held-to-maturity financial assets (Interest amortization)	-	9,194,167	-	9,194,167
Unused annual leave	-	35,413,984	-	35,413,984
Accrued expenses (service contract expenses)	-	(19,515,096)	-	(19,515,096)
Reversal of regular welfare expense	-	116,405	-	116,405
Legal fiction of instant depreciation	-	4,213,042	-	4,213,042
	<u>26,612,335</u>	<u>791,240,833</u>	<u>230,189,476</u>	<u>1,048,042,644</u>
Tax losses	2,813,669,448	22,126,492,146	-	24,940,161,594
Unused tax credit	1,448,933	158,177,273	-	159,626,206
	<u>2,815,118,381</u>	<u>22,284,669,419</u>	<u>-</u>	<u>25,099,787,800</u>
	<u>₩ 2,841,730,716</u>	<u>₩ 23,075,910,252</u>	<u>₩ 230,189,476</u>	<u>₩ 26,147,830,444</u>
Amount excluded in recognition of deferred tax assets (liabilities) ¹	₩ 2,815,118,381	₩ 23,332,712,063	₩ -	₩ 26,147,830,444
Amount included in recognition of deferred tax assets (liabilities)	₩ 26,612,335	₩ (256,801,811)	₩ 230,189,476	₩ -

¹ No deferred tax assets have been recognized, due to the uncertainty of realization.

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The deferred tax relating to items that are charged or credited directly to equity for the years ended December 31, 2018 and 2017, is as follows:

	2018		2017		Increase (decrease) in tax effect
	Amount before income tax	Tax effect	Amount before income tax	Tax effect	
Financial assets at fair value through other comprehensive income (gain (loss) on valuation)	₩ 1,517,289,460	₩ (333,803,681)	₩ (1,140,015,222)	₩ 250,803,349	₩ (584,607,030)
Remeasurements of net defined benefit liability (asset)	(1,083,274,875)	238,320,473	93,699,421	(20,613,873)	258,934,346

	2017		2016		Increase (decrease) in tax effect
	Amount before income tax	Tax effect	Amount before income tax	Tax effect	
Changes in the fair value of available-for-sale financial assets	₩ (1,140,015,222)	₩ 250,803,349	₩ -	₩ -	₩ 250,803,349
Remeasurements of net defined benefit liability (asset)	93,699,421	(20,613,873)	-	-	(20,613,873)

Details of unrecognized deductible temporary differences, tax losses and unused tax credit as at December 31, 2018 and 2017, are as follows:

	2018		2017	
Deductible temporary differences	₩	-	₩	4,763,830,202
Tax losses ¹		141,178,777,078		113,364,370,884
Tax credit ¹		248,422,294		153,432,766
Deduction of donation ¹		89,562,000		28,152,000
	₩	141,516,761,372	₩	118,309,785,852

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¹ The maturity of unused tax losses, tax credit, and deduction of donation is as follows:

<i>(in Korean won)</i>	2018		2017	
2021	₩	1,448,933	₩	1,448,933
2022		151,983,833		180,135,833
2023		94,989,528		-
2026		12,789,406,581		12,789,406,581
2027		100,603,116,303		100,574,964,303
2018		27,875,816,195		-
	₩	141,516,761,373	₩	113,545,955,650

23. Financial Instruments Risk Management

23-1. Overview of Risk Management

23-1.1 Risk Management

The financial risks that the Company is exposed to are credit risk, liquidity risk, market risk, operational risk and others. The Company manages risk by type, nature, size, and complexity of the risk.

This note regarding financial risk management provides information about the risks that the Company is exposed to, including the objectives, policies and processes for managing the risks, the methods used to measure the risks, and capital management. Additional quantitative information is disclosed throughout the financial statements.

23-1.2 Risk Management Organization

Board of Directors

The Board of Directors is the ultimate decision-making authority that appoints and dismisses risk management committee, reviews and resolves matters of the Board Risk Committee subject to resolution.

Board Risk Committee

The Board Risk Committee establishes comprehensive risk management policies such as the recognition, measurement and control of all the risks faced by the Company, including the basic policies and strategies for risk management and setting risk limit of internal capital by risk category. They are monitoring compliance.

Executive Risk Committee

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The Executive Risk Committee is a consultative group which reviews matters delegated by the Board Risk Committee. The Executive Risk Committee is responsible for organizing and managing the risks that may arise in the Company management, as well as supporting the Board of Directors (including the Committee) and management.

Risk Management Group

The Risk Management Group is responsible for managing specific policies, procedures and work processes relating to the Company's risk management.

23-2. Credit Risk

23-2.1 Overview of Credit Risk

Credit risk represents the possibility of financial losses incurred when the counterparty fails to fulfill its contractual obligations. The range of credit risk includes on- and off-balance sheet items (such as loans and securities) related risks.

23-2.2 Credit Risk Management

To measure the probability of default on the counterparty, the Company uses the credit rating system developed in a statistical method to give a credit rating to the borrower and measures the Credit risk by considering exposure at default and the loss given default. The credit rating system is used not only to give credit rating to new borrowers, but also to monitor the changes in credit rating of existing borrowers periodically to roll over the loan automatically, reserve for provide allowance for bad debts, and select symptoms of bad credit.

In order to manage credit risk, the Company has concluded insurance contract payment agreements with Seoul Guarantee Insurance Co., Ltd., which are subject to subrogation, only for products with high uncertainty. The Company prepares to launch various loan products including residential mortgage loans to mitigate credit risk and distribute the portfolio.

The Company has organized a credit risk management group that focuses on credit risk management in accordance with the Company's credit risk management policy. The Company's credit group which are independent from the operating department, are responsible for establishing risk management rules and guideline, developing and monitoring credit evaluation models, measuring the credit risk, reviewing credit, measuring the credit risk internal capital, adjusting credit limits, managing operating risk and others.

23-2.3 Maximum Exposure to Credit Risk

The maximum exposure to credit risk of financial assets is the carrying amount after considering the provision for credit losses, which represents the uncertainty that the net value of financial assets varies according to the variation of the specific risk factor prior to considering the collateral held or other credit reinforcement.

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The Company's maximum exposures of financial instruments, excluding equity securities, to credit risk without consideration of collateral values as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018		2017	
On-balance sheet items				
Due from financial institutions	₩	1,638,626,015,557	₩	422,353,591,275
Loans		9,082,098,248,613		4,621,656,036,172
Financial investments		1,099,702,226,411		523,648,823,645
Other financial assets		200,515,722,697		157,941,452,323
		<u>12,020,942,213,278</u>		<u>5,725,599,903,415</u>
Off-balance sheet items				
Unused loan commitment		3,742,578,896,451		2,814,039,320,902
	₩	<u>15,763,521,109,729</u>	₩	<u>8,539,639,224,317</u>

23-2.4 Credit Risk of Loans

The Company maintains an allowance for loan losses associated with credit risk on loans to manage its credit risk.

Loans are categorized as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	Retail			
	2018		2017	
	Amount	%	Amount	%
Neither past due nor impaired	₩ 9,095,486,403,766	99.79	₩ 4,636,893,486,063	99.93
Past due but not impaired	6,460,913,041	0.07	2,153,956,564	0.05
Impaired	12,361,079,114	0.14	875,513,889	0.02
	<u>9,114,308,395,921</u>	<u>100.00</u>	<u>4,639,922,956,516</u>	<u>100.00</u>
Allowance	<u>(32,210,147,308)</u>		<u>(18,266,920,344)</u>	
Carrying amount	<u>₩ 9,082,098,248,613</u>		<u>₩ 4,621,656,036,172</u>	

Past-due represents a situation where counterparty cannot pay principal and interest on the payment date as stated in the contract. Impairments losses are incurred if there is an objective evidence of impairment and that loss event has an impact on the estimated future cash flows that can be reliably estimated. The Company considers that there is an objective evidence of impairment if overdue of payments for 90 and more than 90 days and trouble debt restructuring.

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Credit qualities of loans that are past due but not impaired as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	Retail			
	2018		2017	
1~29 days	₩	4,455,923,335	₩	1,908,167,606
30~59 days		1,435,132,298		181,133,388
60~89 days		569,857,408		64,655,570
	₩	<u>6,460,913,041</u>	₩	<u>2,153,956,564</u>

Impaired loans as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	Retail			
	2018		2017	
Loans	₩	12,361,079,114	₩	875,513,889
Allowance				
Collectively assessed allowance		(7,259,334,270)		(424,810,508)
	₩	<u>5,101,744,844</u>	₩	<u>450,703,381</u>

A quantification of the extent to which collateral and other credit enhancements mitigate credit risk as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018		2017	
	<u>Impaired Loans</u>	<u>Non-impaired Loans</u>	<u>Impaired Loans</u>	<u>Non-impaired Loans</u>
Guarantee insurance securities of Seoul Guarantee Insurance Co., Ltd.	₩ 3,181,625,288	₩ 1,169,561,332,742	₩ 370,985,134	₩ 550,757,878,192
Guarantee insurance securities of Korea Housing Finance Corporation	-	757,162,747,144	-	-

23-2.5 Credit risk concentration by region

As the Company has only domestic operating activities, the regional information is not presented.

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23-2.6 Details of debt securities

Debt securities that are neither past due nor impaired as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Financial investments	₩ 1,099,702,226,411	₩ 523,648,823,645

23-2.7 Details of securities categorized by the credit ratings

Details of securities categorized by the credit rating as at December 31, 2018 and 2017 are as follows:

<i>(in Korean won)</i>	2018		
	Financial assets at fair value through other comprehensive income	Financial assets at amortized cost	Total
AAA	₩ 49,974,766,155	₩ 229,865,563,281	₩ 279,840,329,436
No rating			
Government bonds	173,999,208,327	425,796,123,336	599,795,331,663
Monetary stabilization bonds	210,066,214,864	10,000,350,448	220,066,565,312
	₩ 434,040,189,346	₩ 665,662,037,065	₩ 1,099,702,226,411

<i>(in Korean won)</i>	2017		
	Available-for-sale financial assets	Held-to-maturity financial assets	Total
AAA	₩ 69,973,976,155	₩ 115,354,101,678	₩ 185,328,077,833
No rating			
Government bonds	69,809,358,304	89,345,977,551	159,155,335,855
Monetary stabilization bonds	169,161,109,080	10,004,300,877	179,165,409,957
	₩ 308,944,443,539	₩ 214,704,380,106	₩ 523,648,823,645

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23-2.8 Changes in provision for credit losses

Changes in provision for credit losses for the year ended December 31, 2018, are as follows:

(in Korean won)

	12-month expected credit losses (1 stage)		Expected lifetime credit losses			Total		
			Non-impaired assets (2 stage)	Impaired assets (3 stage)				
Loans								
Beginning ¹	₩	17,976,390,256	₩	232,994,721	₩	424,810,508	₩	18,634,195,485
Transfer to allowance stages								
Transfer to 2 stage		(178,448,557)		181,509,704		(3,061,147)		-
Transfer to 3 stage		(139,688,048)		(26,221,049)		165,909,097		-
Transfer to 1 stage		87,742,020		(85,736,092)		(2,005,928)		-
Others		(816,395,441)		(31,244,511)		(347,660,971)		(1,195,300,923)
Provision (reversal) of allowance		6,452,934,839		1,296,975,196		7,021,342,711		14,771,252,746
Ending	₩	23,382,535,069	₩	1,568,277,969	₩	7,259,334,270	₩	32,210,147,308
Other financial assets								
Beginning ¹	₩	37,456,389	₩	1,649,506	₩	617,536	₩	39,723,431
Transfer to allowance stages								
Transfer to 2 stage		(558,435)		567,318		(8,883)		-
Transfer to 3 stage		(371,873)		(150,211)		522,084		-
Transfer to 1 stage		387,114		(381,598)		(5,516)		-
Others		(189,929)		(602,947)		(857,413)		(1,650,289)
Provision (reversal) of allowance		11,711,982		11,766,484		5,768,671		29,247,137
Ending	₩	48,435,248	₩	12,848,552	₩	6,036,479	₩	67,320,279
Unused loan commitment								
Beginning ¹	₩	3,914,344,318	₩	8,552,604	₩	-	₩	3,922,896,922
Transfer to allowance stages								
Transfer to 2 stage		(8,143,817)		8,143,817		-		-
Transfer to 3 stage		(2,729,015)		(42,889)		2,771,904		-
Transfer to 1 stage		4,355,469		(4,355,469)		-		-
Provision (reversal) of allowance		(921,168,385)		2,738,942		(2,771,904)		(921,201,347)
Ending	₩	2,986,658,570	₩	15,037,005	₩	-	₩	3,001,695,575

¹Restated based on Korean IFRS 1109.

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23-2.9 Changes in gross carrying amount

Changes in gross carrying amount for the year ended December 31, 2018, are as follows:

(in Korean won)

	12-month expected credit losses (1 stage)	Expected lifetime credit losses		Total
		Non-impaired assets (2 stage)	Impaired assets (3 stage)	
Due from financial institutions				
Beginning	₩ 422,353,591,275	₩ -	₩ -	₩ 422,353,591,275
Collection	(573,656,094)	-	-	(573,656,094)
Initial recognition	1,216,846,080,376	-	-	1,216,846,080,376
Ending	₩ 1,638,626,015,557	₩ -	₩ -	₩ 1,638,626,015,557
Loans				
Beginning ¹	₩ 4,631,895,796,962	₩ 7,151,645,665	₩ 875,513,889	₩ 4,639,922,956,516
Transfer to allowance stages				
Transfer to 2 stage	(16,140,930,646)	16,162,229,632	(21,298,986)	-
Transfer to 3 stage	(12,036,346,854)	(371,311,572)	12,407,658,426	-
Transfer to 1 stage	3,469,401,428	(3,455,104,447)	(14,296,981)	-
Collection	(1,627,267,560,079)	(5,315,102,969)	(4,464,574,684)	(1,637,047,237,732)
Others	(825,828,449)	(31,244,511)	(270,508,057)	(1,127,581,017)
Initial recognition	6,092,787,099,566	15,924,573,081	3,848,585,507	6,112,560,258,154
Ending	₩ 9,071,881,631,928	₩ 30,065,684,879	₩ 12,361,079,114	₩ 9,114,308,395,921
Debt instruments at amortized cost				
Beginning	₩ 214,704,380,106	₩ -	₩ -	₩ 214,704,380,106
Collection	(75,389,173,240)	-	-	(75,389,173,240)
Others	1,732,610,715	-	-	1,732,610,715
Initial recognition	524,614,219,484	-	-	524,614,219,484
Ending	₩ 665,662,037,065	₩ -	₩ -	₩ 665,662,037,065
Debt instruments at fair value through other comprehensive income				
Beginning	₩ 308,944,443,539	₩ -	₩ -	₩ 308,944,443,539
Collection	(90,209,115,272)	-	-	(90,209,115,272)
Others	2,133,967,344	-	-	2,133,967,344
Initial recognition	213,170,893,735	-	-	213,170,893,735
Ending	₩ 434,040,189,346	₩ -	₩ -	₩ 434,040,189,346
Other financial assets				
Beginning ¹	₩ 158,070,509,459	₩ 27,157,833	₩ 1,457,145	₩ 158,099,124,437
Transfer to allowance stages				

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Transfer to 2 stage	(42,655,826)	42,711,896	(56,070)	-
Transfer to 3 stage	(27,527,487)	(1,979,319)	29,506,806	-
Transfer to 1 stage	9,485,026	(9,447,861)	(37,165)	-
Collection	(7,395,595,223)	(22,919,899)	(28,175,518)	(7,446,690,640)
Others	(189,929)	(602,947)	(857,413)	(1,650,289)
Initial recognition	49,989,523,130	73,759,390	10,490,569	50,073,773,089
Ending	₩ 200,603,549,150	₩ 108,679,093	₩ 12,328,354	₩ 200,724,556,597

Unused loan commitment

Beginning	₩ 2,812,519,647,864	₩ 1,297,635,400	₩ 222,037,638	₩ 2,814,039,320,902
Transfer to allowance stages				
Transfer to 2 stage	(2,178,623,372)	2,181,882,668	(3,259,296)	-
Transfer to 3 stage	(718,417,193)	(3,917,643)	722,334,836	-
Transfer to 1 stage	953,800,017	(952,671,653)	(1,128,364)	-
Decrease	(1,171,095,481,926)	(1,768,802,872)	(939,984,814)	(1,173,804,269,612)
Initial recognition	2,100,412,145,124	1,931,700,037	-	2,102,343,845,161
Ending	₩ 3,739,893,070,514	₩ 2,685,825,937	₩ -	₩ 3,742,578,896,451

¹Restated based on Korean IFRS 1109

23-2.10 Exposure by credit risk rating

Details of exposure by credit risk rating as at December 31, 2018, are as follows:

(in Korean won)

	12-month expected credit losses (1 stage)	Expected lifetime credit losses		Total
		Non-impaired assets (2 stage)	Impaired assets (3 stage)	
Due from financial institutions¹				
Grade 1	₩ 1,637,126,015,557	₩ -	₩ -	₩ 1,637,126,015,557
Grade 2	1,500,000,000	-	-	1,500,000,000
Grade 3	-	-	-	-
	1,638,626,015,557	-	-	1,638,626,015,557
Provision for credit losses	-	-	-	-
Carrying amount	₩ 1,638,626,015,557	₩ -	₩ -	₩ 1,638,626,015,557
Loans²				
Grade 1	₩ 7,474,942,751,755	₩ 5,273,155,304	₩ -	₩ 7,480,215,907,059
Grade 2	584,666,710,284	874,707,138	-	585,541,417,422
Grade 3	859,064,474,295	9,195,218,159	-	868,259,692,454
Grade 4	120,829,704,805	4,638,982,652	-	125,468,687,457
Grade 5	32,377,990,789	10,083,621,626	12,361,079,114	54,822,691,529

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		9,071,881,631,928	30,065,684,879	12,361,079,114	9,114,308,395,921			
Provision for credit losses		(23,382,535,069)	(1,568,277,969)	(7,259,334,270)	(32,210,147,308)			
Carrying amount	₩	9,048,499,096,859	₩	28,497,406,910	₩	5,101,744,844	₩	9,082,098,248,613
Debt instruments at amortized cost¹								
Grade 1	₩	665,662,037,065	₩	-	₩	-	₩	665,662,037,065
		665,662,037,065		-		-		665,662,037,065
Provision for credit losses		-		-		-		-
Carrying amount	₩	665,662,037,065	₩	-	₩	-	₩	665,662,037,065
Debt instruments at fair value through other comprehensive income¹								
Grade 1	₩	434,040,189,346	₩	-	₩	-	₩	434,040,189,346
		434,040,189,346		-		-		434,040,189,346
Provision for credit losses		-		-		-		-
Carrying amount	₩	434,040,189,346	₩	-	₩	-	₩	434,040,189,346
Other financial assets³								
Grade 1	₩	26,471,262,171	₩	8,184,701	₩	-	₩	26,479,446,872
Grade 2		1,104,627,497		2,081,611		-		1,106,709,108
Grade 3		2,057,632,462		25,504,717		-		2,083,137,179
Grade 4		355,446,288		15,607,974		-		371,054,262
Grade 5		103,461,262		57,300,090		12,328,354		173,089,706
No rating		170,511,119,470		-		-		170,511,119,470
		200,603,549,150		108,679,093		12,328,354		200,724,556,597
Provision for credit losses		(48,435,248)		(12,848,552)		(6,036,479)		(67,320,279)
Carrying amount	₩	200,555,113,902	₩	95,830,541	₩	6,291,875	₩	200,657,236,318
Unused loan commitment²								
Grade 1	₩	3,438,260,849,285	₩	1,113,683,429	₩	-	₩	3,439,374,532,714
Grade 2		136,830,798,315		112,543,225		-		136,943,341,540
Grade 3		137,885,426,624		616,027,692		-		138,501,454,316
Grade 4		24,463,051,082		491,073,607		-		24,954,124,689
Grade 5		2,452,945,208		352,497,984		-		2,805,443,192
		3,739,893,070,514		2,685,825,937		-		3,742,578,896,451
Provision for credit losses		(2,986,658,570)		(15,037,005)		-		(3,001,695,575)
Carrying amount	₩	3,736,906,411,944	₩	2,670,788,932	₩	-	₩	3,739,577,200,876

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¹ Criteria of GRADE of due from financial institutions and securities are as follows:

GRADE 1	External credit rating AAA Government and public bonds/Debt securities guaranteed by Government or loss- compensated, and due from Bank of Korea
GRADE 2	External credit rating AA
GRADE 3	External credit rating A
GRADE 4	External credit rating BBB
GRADE 5	External credit rating BB
GRADE 6	External credit rating B
GRADE 7	External credit rating CCC
GRADE 8	External credit rating CC
GRADE 9	External credit rating C
GRADE 10	External credit rating D

² Criteria of GRADE of loans and unused loan commitment are as follows:

GRADE 1	0.75% and less than 0.75% of probability of default
GRADE 2	1.35% and less than 1.35% of probability of default
GRADE 3	5% and less than 5% of probability of default
GRADE 4	10% and less than 10% of probability of default
GRADE 5	Over 10% of probability of default

³ Among other financial assets, the Company classified GRADE of accrued interest of loans and suspense credit receivable according to the information in the original accounts, and other items are classified as no grade.

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23-2.11 Exposure by counterparty

Details of exposure by counterparty as at December 31, 2018, are as follows:

<i>(in Korean won)</i>	Gross carrying amount		Provision for credit losses		Carrying amount	
Due from financial institutions						
Government and public institution	₩	1,636,358,633,587	₩	-	₩	1,636,358,633,587
Banks		2,267,381,970		-		2,267,381,970
		<u>1,638,626,015,557</u>		<u>-</u>		<u>1,638,626,015,557</u>
Loans						
Retail	₩	9,114,308,395,921	₩	(32,210,147,308)	₩	9,082,098,248,613
Debt instruments at amortized cost						
Government and public institution	₩	665,662,037,065	₩	-	₩	665,662,037,065
Debt instruments at fair value through other comprehensive income						
Government and public institution	₩	434,040,189,346	₩	-	₩	434,040,189,346
Other financial assets						
Government and public institution	₩	16,242,063,482	₩	-	₩	16,242,063,482
Banks		18,171,340,025		-		18,171,340,025
Other financial institutions		148,794,863,131		-		148,794,863,131
Corporate and others		3,557,600,653		-		3,557,600,653
Retail		13,958,689,306		(67,320,279)		13,891,369,027
		<u>200,724,556,597</u>		<u>(67,320,279)</u>		<u>200,657,236,318</u>
Unused loan commitment						
Retail	₩	3,742,578,896,451	₩	(3,001,695,575)	₩	3,739,577,200,876

As the Company has only retail loans, the industrial information is not disclosed.

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23-3. Liquidity Risk

23-3.1 Overview of Liquidity Risk

Liquidity risk is the risk of insolvency due to a disparity of contract maturity between assets and liabilities, the risk of loss in the cash flow of bank assets due to market price reduction following market crisis.

23-3.2 Liquidity Risk Management

The liquidity coverage ratio (LCR), the management guidance rate of the Financial Supervisory Service, is calculated and managed by the ALM Risk Management System and also calculated and monitored daily. For internal management, the Board Risk Committee sets and manages a limit on liquidity risks separately from the regulatory levels of the supervisory authorities, and reports their compliance to the Executive Risk Committee every month. Depending on the scenarios resulting from the liquidity crisis situation, the analysis are reported to the Executive Risk Committee on a quarterly basis and the plan for the crisis are reported also at least annually. The Company also establish and monitor early alarm indicators, report their results to the Executive Risk Committee on a monthly basis, and establish contingency funding plan for liquidity crisis.

Details of remaining contractual maturity of financial liabilities as at December 31, 2018 and 2017, are as follows:

(in Korean won)

	2018			
	Financial liabilities			Off-balance sheet items
	Deposits	Others	Total	Unused loan commitment
Up to 1 month	₩ 4,572,606,050,294	₩ 107,247,970,372	₩ 4,679,854,020,666	₩ 3,742,578,896,451
1~3 months	1,253,027,790,898	-	1,253,027,790,898	-
3~6 months	1,190,130,368,789	-	1,190,130,368,789	-
6~12 months	3,378,539,242,390	-	3,378,539,242,390	-
1~5 years	566,071,760,440	-	566,071,760,440	-
Over 5 years	671,282,348	-	671,282,348	-
	<u>₩ 10,961,046,495,159</u>	<u>₩ 107,247,970,372</u>	<u>₩ 11,068,294,465,531</u>	<u>₩ 3,742,578,896,451</u>

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2017

	Financial liabilities			Off-balance sheet items
	Deposits	Others	Total	Unused loan commitment
Up to 1 month	₩ 1,908,307,583,665	₩ 103,317,993,179	₩ 2,011,625,576,844	₩ 2,814,039,320,902
1~3 months	251,651,570,147	-	251,651,570,147	-
3~6 months	172,362,170,376	-	172,362,170,376	-
6~12 months	2,500,288,983,469	-	2,500,288,983,469	-
1~5 years	279,508,508,039	-	279,508,508,039	-
Over 5 years	102,180,708	-	102,180,708	-
	<u>₩ 5,112,220,996,404</u>	<u>₩ 103,317,993,179</u>	<u>₩ 5,215,538,989,583</u>	<u>₩ 2,814,039,320,902</u>

The time period classification above was subdivided based on the judgment of management. The amounts disclosed above include undiscounted contractual principal and interest to be paid and the Company classified the amounts as the earliest due date for our payment obligation.

23-4. Market Risk

23-4.1 Overview of Market Risk

Market risk is the risk of losses that may arise due to fluctuation in market price, such as interest rates, equity prices, and foreign exchange rates, and will affect the Company's income or the value of its trading portfolios. The Company may be exposed to market risks by possessing net foreign currency position, marketable securities, derivatives, and other financial instruments assets and liabilities with inherent market risks. The Company manages market risks by separating them into trading positions and non-trading positions, depending on the holding purpose and characteristics of financial instruments.

The purpose of managing market risks is to pursue profitability and stability simultaneously by determining the maximum possible loss in assets and liabilities exposed to fluctuation in market prices, such as interest rates, stock prices and exchange rates and managing the loss within the allowable limit of the Company.

23-4.2 Management of Market Risk

Market risk Management for trading positions

A trading position is the position of a financial instrument held with the intention of trading or to reduce or eliminate the risk of other trading positions.

The Company measures and manages the market risk associated with our trading position by dividing it into general market risks and individual risks. General market risk refers to the risk of

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loss of target position due to changes in the general level of market prices such as interest rate, stock price, and exchange rate. Individual risk refers to the risk of loss of target position due to changes in credit risk of bonds and equity issuers as well as changes in general market prices. The Company measures the general market risk and individual risk using the standardized approach in accordance with the "Detailed Regulations on Supervision of Banking Business" <Appendix 3-2> "Standard for Calculation of Capital-to-Equity Ratio for Credit, Operating and Market Risk-Weighted Assets" as stipulated in Chapter 2, and reports it to the Executive Risk Committee.

The Company established the "Trading Book Procedure" and "Market Risk Management Procedure" as internal guidelines for market risk management in the Executive Risk Committee. The "Trading Policy Guideline" sets out the basic principles of the definition and characteristics of trading positions, the range of financial instruments to be controlled, the control procedure, and valuation. In the "Market Risk Management Procedure," the Company has established work flows and procedures for systematically and efficiently recognizing, measuring, reporting and managing market risks arising from holding trading positions.

The Company limits the range of financial instruments that can be treated as trading positions to interest rate risk positions (derivatives positions whose interest rates are based on the underlying assets). In the case of expanding the range of financial instruments subject to changes in business plans, the details of financial instruments, transaction departments, and management limits and others should be documented and approved by management.

As at the reporting date, there is no market risk management position held by the Company.

Market risk Management for Non-trading positions

The market risk for non-trading positions is the interest rate risk arising from the maturity mismatch between interest-bearing assets and interest-bearing debt due to interest rate fluctuations. The Company measures and manages interest rate risk using the standard method as stipulated in Chapter 2 of the "Detailed Regulations on Supervision of Banking Business" (Attachment 9-1) "Standard for Calculation of Interest Rate Risk, ". The Company calculates interest rate VaR to measure fluctuations in net asset value and interest rate EaR to monitor changes in net interest income every month and reports it to the Executive Risk Committee.

Risk is measured using an interest rate VaR that represents the maximum possible loss amount that could occur under a confidence level of 99.90% for interest risk.

The measurement results of risk as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Interest Rate VaR	₩ 34,537,380,169	₩ 22,320,997,243

23-5. Operating Risk

23-5.1 Overview of Operating Risk

The Company defines operational risk as risk of loss resulting from inadequate or failed internal processes, people, systems and external events. Operation risks include legal risks, but do not include strategy and reputation risks. The legal risks include, but are not limited to, exposures to fines, penalties and punitive damages and personal agreements resulting from surveillance actions.

23-5.2 Management of Operating Risk

Through the operational risk management system that has been completed in 2017, the Company is scheduled to systematically accumulate and manage operating risk events and loss data actually generated by the Risk & Control Self Assessment (RCSA) and KRI (Key Risk Indicator), which is a means for managing operational risks.

23-6. Capital Risk

The Company complies with the capital adequacy standard established by the Financial Services Commission. Capital adequacy standards are applied in line with global standards, such as those recommended by the Basel Committee on Banking Supervision in the Bank for International Settlements. However, different levels of regulations are applied in consideration of the business style according to the type of authorization and size of the bank. Accordingly, the Company complies the minimum capital ratio of risk-weighted assets based on Basel I standards by 2019 and plans to comply the minimum capital ratio based on the Basel III standard from 2020.

The capital ratio is calculated by dividing the amount of equity capital based on the financial statements by the total amount of risk-weighted assets. As at December 31, 2018, the Company is required to maintain the minimum capital ratio of at least 8.0%.

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Details of the Company's capital adequacy ratio in line with Basel I requirements as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Equity Capital		
Tier I Capital	₩ 1,073,498,393,060	₩ 589,569,848,284
Tier II Capital	28,031,605,945	21,767,708,480
	<u>1,101,529,999,005</u>	<u>611,337,556,764</u>
Risk-weighted assets ¹	7,955,383,936,242	4,448,358,566,354
Equity Capital (%)	13.85%	13.74%
Tier I Capital (%)	13.49%	13.25%

¹Risk weighted assets are measured using the risk weighted calculation standard based on Basel I

In addition to the capital ratio, the Company conducts a capital adequacy assessment to assess whether the Company has adequate capital to manage the significant risks.

The assessment of the capital adequacy is conducted by calculating the amount of capital (internal capital) necessary to cover the important risks that the Company faces when taking into account its operating environment, business goals, crisis situation, etc. The assessment is to ensure that the available capital of the bank (substantially available capital to compensate for management losses) can be maintained at an appropriate level that exceeds the required capital.

The Company determines internal capital limits (risk appetite) within the range of available capital in consideration of the size and quality of current and future available capital, level of risk tolerance, and business strategy and sets a limit for each type of risk (credit, market, operation, interest rate, etc.) by dividing the internal capital limit determined considering business strategy and characteristics by type of risk. Monthly monitoring is conducted to ensure that each risk type is managed within the limits set for each type of risk, and the results of the monitoring are reported to the Board Risk Committee and the Executive Risk Committee. In case of exceeding the limit of internal capital, the Company manages the adequacy of its capital by restricting the limits for each type of risk, resetting internal capital limits, establishing a risk reduction plan, and raising capital. Countermeasures of the risk are reviewed and approved by the Board Risk Committee and the Executive Risk Committee.

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23-7. Fair Value Disclosures

The fair value of financial instruments traded in active markets is based on quoted market prices at the end of the reporting period.

If the fair value of financial instruments that are not traded in an active market, fair value is measured by using a valuation obtained from independent third-party valuation service. The Company uses diverse valuation techniques using reasonable assumptions based on relative market conditions at the end of each reporting period.

23-7.1 Financial Instruments Measured at Amortized Cost

The method of measuring the fair value of financial instruments measured at amortized cost is as follows:

Measurement methods of fair value

Cash and due from financial institutions	The carrying amount is reasonable approximation of fair values and most deposits have floating interest rate or a short-term maturity. Therefore, the carrying amount is regarded as representative of fair value.
Loans	DCF(Discounted Cash Flow) Model is used to determine the fair value of loans.
Debt securities at amortized cost	The fair value is measured at the lower value of the unit prices of the recent trading days provided by FN Pricing and KIS Pricing. The fair value is determined by using DCF(Discounted Cash Flow) Model of independent third-party pricing services.
Deposits and debts	The carrying amount of demand deposits is regarded as representative of fair value because they are payable on demand. The fair value of other deposits and borrowings is measured by discounting the contractual cash flows at the market interest rate that takes into account the residual risk.
Other financial assets and liabilities	The carrying amounts are reasonable approximation of fair values, without using the DCF(Discounted Cash Flow) Model. These financial instruments are temporary accounts derived from other various transactions and their maturities are relatively short or not defined.

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Carrying amount and fair value of financial instruments at amortized cost as at December 31, 2018 and 2017, are as follows:

(in Korean won)

	2018				
	Carrying amount				
	Balance	Unamortized balance ¹	Allowance	Total	Fair value
Assets					
Cash and due from financial institutions					
Cash and cash equivalents	₩ 1,845,511,000	₩ -	₩ -	₩ 1,845,511,000	₩ 1,845,511,000
Due from financial institutions	1,638,626,015,557	-	-	1,638,626,015,557	1,638,626,015,557
	<u>1,640,471,526,557</u>	<u>-</u>	<u>-</u>	<u>1,640,471,526,557</u>	<u>1,640,471,526,557</u>
Financial investments	665,662,037,065	-	-	665,662,037,065	674,337,987,172
Loans	9,082,589,669,163	31,718,726,758	(32,210,147,308)	9,082,098,248,613	9,074,744,235,776
Other financial assets	<u>200,724,556,597</u>	<u>(141,513,621)</u>	<u>(67,320,279)</u>	<u>200,515,722,697</u>	<u>200,515,722,697</u>
	<u>₩ 11,589,447,789,382</u>	<u>₩ 31,577,213,137</u>	<u>₩ (32,277,467,587)</u>	<u>₩ 11,588,747,534,932</u>	<u>₩ 11,590,069,472,202</u>
Liabilities					
Deposits	10,811,627,835,273	-	-	10,811,627,835,273	10,812,973,697,675
Other financial liabilities	<u>163,689,441,925</u>	<u>-</u>	<u>-</u>	<u>163,689,441,925</u>	<u>163,689,441,925</u>
	<u>₩ 10,975,317,277,198</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 10,975,317,277,198</u>	<u>₩ 10,976,663,139,600</u>

(in Korean won)

	2017				
	Carrying amount				
	Balance	Unamortized Balance ¹	Allowance	Total	Fair value
Assets					
Cash and due from financial institutions					
Cash and cash equivalents	₩ 1,002,431,400	₩ -	₩ -	₩ 1,002,431,400	₩ 1,002,431,400
Due from financial institutions	422,351,159,875	-	-	422,351,159,875	422,351,159,875
	<u>423,353,591,275</u>	<u>-</u>	<u>-</u>	<u>423,353,591,275</u>	<u>423,353,591,275</u>
Held-to-maturity financial assets	214,704,380,106	-	-	214,704,380,106	213,594,076,288
Loans	4,621,831,541,158	18,091,415,358	(18,266,920,344)	4,621,656,036,172	4,615,008,588,176
Other financial assets	<u>158,099,124,437</u>	<u>(118,798,251)</u>	<u>(38,873,863)</u>	<u>157,941,452,323</u>	<u>157,941,452,323</u>
	<u>₩ 5,417,988,636,976</u>	<u>₩ 17,972,617,107</u>	<u>₩ (18,305,794,207)</u>	<u>₩ 5,417,655,459,876</u>	<u>₩ 5,409,897,708,062</u>
Liabilities					
Deposits	5,048,299,700,757	-	-	5,048,299,700,757	5,044,482,538,053
Other financial liabilities	<u>118,179,791,801</u>	<u>-</u>	<u>-</u>	<u>118,179,791,801</u>	<u>118,179,791,801</u>

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₩	5,166,479,492,558	₩	-	₩	-	₩	5,166,479,492,558	₩	5,162,662,329,854
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¹Unamortized balance consist of deferred loan origination costs and present value discount.

Fair value hierarchy classifications of the financial instruments not measured at fair value but for which the fair value is disclosed as at December 31, 2018 and 2017, are as follows:

(in Korean won)

	2018			
	Level 1	Level 2	Level 3	Total
Cash and due from financial institutions				
Cash and cash equivalents	₩ 1,845,511,000	₩ -	₩ -	₩ 1,845,511,000
Due from financial institutions	-	1,638,626,015,557	-	1,638,626,015,557
	1,845,511,000	1,638,626,015,557	-	1,640,471,526,557
Financial assets at amortized cost				
Debt securities	442,545,469,281	231,792,517,891	-	674,337,987,172
Loans				
Retails	-	-	9,074,744,235,776	9,074,744,235,776
Other financial assets	-	-	200,515,722,697	200,515,722,697
	₩ 444,390,980,281	₩ 1,870,418,533,448	₩ 9,275,259,958,473	₩ 11,590,069,472,202
Deposits	₩ -	₩ 3,564,430,653,871	₩ 7,248,543,043,804	₩ 10,812,973,697,675
Other financial liabilities	-	-	163,689,441,925	163,689,441,925
	₩ -	₩ 3,564,430,653,871	₩ 7,412,232,485,729	₩ 10,976,663,139,600

(in Korean won)

	2017			
	Level 1	Level 2	Level 3	Total
Cash and due from financial institutions				
Cash and cash equivalents	₩ 1,000,000,000	₩ 2,431,400	₩ -	₩ 1,002,431,400
Due from financial institutions	-	422,351,159,875	-	422,351,159,875
	1,000,000,000	422,353,591,275	-	423,353,591,275
Held-to-maturity financial assets				
Debt securities	98,501,675,042	115,092,401,246	-	213,594,076,288
Loans				
Retails	-	-	4,615,008,588,176	4,615,008,588,176
Other financial assets	-	-	157,941,452,323	157,941,452,323
	₩ 99,501,675,042	₩ 537,445,992,521	₩ 4,772,950,040,499	₩ 5,409,897,708,062
Deposits	₩ -	₩ 1,696,184,512,278	₩ 3,348,298,025,775	₩ 5,044,482,538,053
Other financial liabilities	-	-	118,179,791,801	118,179,791,801
	₩ -	₩ 1,696,184,512,278	₩ 3,466,477,817,576	₩ 5,162,662,329,854

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Valuation techniques and inputs used in the fair value measurements as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	Level	2018	2017	Valuation techniques	Inputs
Cash and cash equivalents	2	₩ -	₩ 2,431,400	-	-
Due from financial institutions	2	1,638,626,015,557	422,351,159,875	-	-
Debt securities at amortized cost	2	231,792,517,891	-	Discounted cash flow	Discount rate
Held-to-maturity financial assets	2	-	115,092,401,246	Discounted cash flow	Discount rate
Loans	3	9,074,744,235,776	4,615,008,588,176	Discounted cash flow	Credit spreads, Other spreads, Interest rate
Other financial assets ¹		200,515,722,697	157,941,452,323	-	-
		<u>₩ 11,145,678,491,921</u>	<u>₩ 5,310,396,033,020</u>		
Deposits	2	₩ 3,564,430,653,871	₩ 1,696,184,512,278	Discounted cash flow	Discount rate
Deposits	3	7,248,543,043,804	3,348,298,025,775	Discounted cash flow	Other spreads, Interest rate
Other financial liabilities ¹		163,689,441,925	118,179,791,801	-	-
		<u>₩ 10,976,663,139,600</u>	<u>₩ 5,162,662,329,854</u>		

¹ Valuation techniques and inputs of the financial instruments whose carrying amount is a reasonable approximation of fair value, are not disclosed.

23-7.2 Financial Instruments Measured at Fair Value

Fair value of financial instruments by fair value hierarchy

The Company classifies and discloses fair value of financial instruments into the following three-level hierarchy:

- Level 1: Financial instruments measured at quoted prices in active markets are classified as level 1.
- Level 2: Financial instruments measured using valuation techniques based on inputs that are observable in the market are classified as level 2.
- Level 3: Financial instruments measured using valuation techniques where one or more significant inputs are not observable in the market are classified as level 3.

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(in Korean won)

	2018			
	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets at fair value through other comprehensive income				
Debt securities	₩ 384,065,423,191	₩ 49,974,766,155	₩ -	₩ 434,040,189,346

(in Korean won)

	2017			
	Level 1	Level 2	Level 3	Total
Financial assets				
Available-for-sale financial assets				
Debt securities	₩ 238,970,467,384	₩ 69,973,976,155	₩ -	₩ 308,944,443,539

There are no transfer between levels 1 and 2 of financial asset measured at fair value for the periods ended December 31, 2018 and 2017.

Valuation techniques and the inputs

Valuation techniques and inputs used in levels 2 fair value measurements as at December 31, 2018 and 2017, are as follows:

(in Korean won)	Valuation techniques	2018	2017	Inputs
Financial assets at fair value through other comprehensive income	Discounted cash flow	₩ 49,974,766,155	₩ -	Discount rate
Available-for-sale financial assets	Discounted cash flow	-	69,973,976,155	Discount rate

There are no financial instruments classified as level 3 as at December 31, 2018 and 2017.

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23-8. Offsetting Financial Assets and Financial Liabilities

The following table presents the financial assets that are offset, or subject to enforceable master netting arrangements and other similar agreements as at December 31, 2018 and 2017.

(in Korean won)

	2018					
	Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities set off	Net amounts presented in the statement of financial position	Amounts not offset		Net amount
				Financial instruments	Cash collateral received	
Domestic exchange settlement debits	₩ 565,259,904,377	₩ (398,306,385,560)	₩ 166,953,518,817	₩ -	₩ -	₩ 166,953,518,817

(in Korean won)

	2017					
	Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities set off	Net amounts presented in the statement of financial position	Amounts not offset		Net amount
				Financial instruments	Cash collateral received	
Domestic exchange settlement debits	₩ 226,690,674,271	₩ (82,750,833,169)	₩ 143,939,841,102	₩ -	₩ -	₩ 143,939,841,102

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The following table presents the recognized financial liabilities that are offset, or subject to enforceable master netting arrangements and other similar agreements as at December 31, 2018 and 2017.

(in Korean won)

	2018					
	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off	Net amounts presented in the statement of financial position	Amounts not offset		Net amount
Financial instruments				Cash collateral received		
Domestic exchange settlement credits	₩ 420,448,323,461	₩ (398,306,385,560)	₩ 22,141,937,901	₩ (22,141,937,901)	₩ -	-

(in Korean won)

	2017					
	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off	Net amounts presented in the statement of financial position	Amounts not offset		Net amount
Financial instruments				Cash collateral received		
Domestic exchange settlement credits	₩ 118,403,728,464	₩ (82,750,833,169)	₩ 35,652,895,295	₩ (35,652,895,295)	₩ -	-

24. Contingencies and Commitments

As at December 31, 2018, the Company has filed a lawsuit (affirmation of loans) as a plaintiff, involving aggregate claim of ₩ 6,911,197, and faces seven lawsuits (affirmation of loans), as a defendant, involving aggregate damages of ₩ 85,595,590.

There are no purchase commitment and residual cash deficiency support agreement at the date of issuance as at December 31, 2018.

KakaoBank of Korea Corp.
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25. Leases

25.1 Finance Lease

There are no future minimum lease payments as at December 31, 2018 and 2017.

25.2 Operating Lease

The future minimum lease payments arising from the non-cancellable operating lease contracts as at December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Within 1 year	₩ 5,724,828,218	5,497,166,593
1~5 years	10,814,051,953	16,538,880,171
	<u>₩ 16,538,880,171</u>	<u>22,036,046,764</u>

26. Supplemental Cash Flow Information

Significant non-cash transactions for the periods ended December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	2018	2017
Transfer of beginning balance of retained earnings due to changes in accounting policy	₩ (444,668,883)	₩ -
Gain on valuation of financial assets at fair value through other comprehensive income	2,657,304,682	-
Changes in the fair value of available-for-sale financial assets	-	(1,140,015,222)
Remeasurements of net defined benefit liability	(1,176,974,296)	93,699,421
Reclassification from advance payments to property and equipment	-	6,402,202,912
Reclassification from advance payments to intangible assets	836,000,000	37,167,294,518
Written-off of loans	(1,127,581,017)	-

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27. Related Party Transactions

Details of related parties are as follows:

Type	2018
Parent Company	Korea Investment Holdings Co., Ltd
Parent Company's subsidiary	Korea Investment & Securities Co., Ltd Korea Investment Partners Co., Ltd. Korea Investment Savings Bank Korea Investment Capital KIARA CAPITAL PTE. LTD. KIARA CAPITAL II PTE. LTD. KIARA ADVISORS PTE. LTD. EQ Partners

Details of receivables and payables arising from related party transactions as at December 31, 2018 and 2017, are as follows:

(in Korean won)

Type	Name of entity	Receivables /Payables	2018	2017
Parent Company's subsidiary	Korea Investment & Securities Co., Ltd.	Other payables	₩ 12,540,240	₩ 2,339,533
Key management		Deposits	375,045,056	367,581,575
			₩ 387,585,296	₩ 369,921,108

Profit and loss arising from transactions with related parties for the periods ended December 31, 2018 and 2017, are as follows:

(in Korean won)

Type	Name of entity	Details	Profit		Loss	
			2018	2017	2018	2017
Parent Company	Korea Investment Holdings Co., Ltd	Interest expenses	₩ -	₩ -	₩ -	₩ 6,986,338
Parent Company's subsidiary	Korea Investment & Securities Co., Ltd.	Fee and commission expenses	-	-	15,180,240	4,099,533
Key management		Interest expenses	-	-	6,020,948	1,124,568
			₩ -	₩ -	₩ 21,201,188	₩ 12,210,439

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Significant borrowing transactions with related parties for the periods ended December 31, 2018 and 2017, are as follows:

(in Korean won)

		2018			
		Beginning	Borrowing	Repayments	Ending
Key management	Deposits	₩ 338,110,000	₩ 548,637,581	₩ (543,646,000)	₩ 343,101,581

(in Korean won)

		2017			
		Beginning	Borrowing	Repayments	Ending
Key management	Deposits	₩ -	₩ 448,710,000	₩ (110,600,000)	₩ 338,110,000

Acceptances and guarantees and unused commitments provided to related parties as at December 31, 2018 and 2017, are as follows:

(in Korean won)

		2018	2017
Key management	Loan commitment in Korean won	₩ -	₩ 2,000,000

The amounts of debt securities purchased through Korea Investment & Securities Co., Ltd are ₩ 199,339,650,000 and ₩ 45,569,750,000 for the periods ended December 31, 2018 and 2017, respectively, and the amount of debt securities sold through Korea Investment & Securities Co., Ltd is ₩ 40,117,000,000 for the year ended December 31, 2018 and there is no amount of debt securities sold to Korea Investment & Securities Co., Ltd for the year ended December 31, 2017.

The compensation to key management for the periods ended December 31, 2018 and 2017, consists of:

(in Korean won)

	2018	2017
Salaries and short-term compensation	₩ 1,562,577,841	₩ 1,084,354,836
Post-employment benefits	146,250,000	56,250,000
	<u>₩ 1,708,827,841</u>	<u>₩ 1,140,604,836</u>

Key management consists of the directors (including nonexecutive directors) of the Company who have the rights and responsibilities over the Company's business planning, managing, and supervision.

KakaoBank of Korea Corp.
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December 31, 2018 and 2017

28. Regulatory Reserve for Credit Losses

Measurement and Disclosure of Regulatory Reserve for Credit Losses are required in accordance with Articles 29.1 through 29.2 of Regulation on Supervision of Banking Business.

The Company do not appropriate reserve for credit losses since the Company has undisposed accumulated deficit. The Company only discloses information of the amount required to reserve for credit losses and adjusted loss after provision of regulatory reserve for credit losses for the periods ended December 31, 2018 and 2017.

<i>(in Korean won)</i>	2018	2017
Amount required to reserve for credit losses	₩ 42,219,969,729	₩ 30,361,373,502
Adjusted loss after provision of regulatory reserve for credit losses	(63,174,535,512)	(134,852,408,773)

29. Changes in Accounting Policies

29.1 Application of Korean IFRS 1109 *Financial Instruments*

As explained in Note 3, the Company has applied Korean IFRS 1109 *Financial Instruments* on January 1, 2018, the date of initial application. In accordance with the transitional provisions in Korean IFRS 1109, comparative figures for prior reporting period have not been restated. The application of Korean IFRS 1109 has following impacts on the financial statements.

(a) *Beginning balance of retained earnings after restatement*

Details of beginning balance of retained earnings restated due to application of Korean IFRS 1109 are as follows:

<i>(in Korean won)</i>	Amount
Beginning balance of retained earnings - Korean IFRS 1039	₩ (119,792,802,456)
Increase in provision for impairment of loans in Korean won	(367,275,141)
Increase in provision for impairment of other financial assets	(849,568)
Increase in provision for impairment of unused loan commitment	(76,544,174)
Beginning balance of retained earnings - Korean IFRS 1109	<u>₩ (120,237,471,339)</u>

KakaoBank of Korea Corp.
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On the date of initial application of Korean IFRS 1109, January 1, 2018, the Company's management has assessed which business models apply to the financial assets held by the Company and has classified its financial instruments into the appropriate Korean IFRS 1109 categories. The main effects resulting from this reclassification are as follows:

<i>(in Korean won)</i>	Fair value through other comprehensive income (2017: Available-for-sale financial assets)	Amortized cost (2017: Held-to- maturity financial assets, loans and receivables) ²	Total
Financial assets – January 1, 2018			
Beginning balance – Korean IFRS 1039 ¹	₩ 308,944,443,539	₩ 5,433,577,620,934	₩ 5,742,522,064,473
Reclassification of debt securities from held-to-maturity financial assets to financial assets at amortized cost ¹	-	-	-
Reclassification of debt securities from available-for-sale financial assets to financial assets at fair value through other comprehensive income ¹	-	-	-
Beginning balance - Korean IFRS 1109 ¹	<u>₩ 308,944,443,539</u>	<u>₩ 5,433,577,620,934</u>	<u>₩ 5,742,522,064,473</u>

¹ The beginning balance as at January 1, 2018, presented available-for-sale financial assets at fair value through other comprehensive income, and held-to-maturity investments and loans and receivables at amortized cost, respectively. These reclassifications have no impact on the measurement categories.

² Including due from financial institutions

These changes have no impact on the Company's equity.

(i) Reclassification from available-for-sale to fair value through profit or loss

As at January 1, 2018, there is no reclassification from available-for-sale to financial assets at fair value through profit or loss.

(ii) Reclassification from available-for-sale to amortized cost

As at January 1, 2018, there is no reclassification from available-for-sale to amortized cost.

(iii) Reclassification from held-to-maturity financial assets to amortized cost

Debt securities recognized as held-to-maturity financial assets were reclassified to financial assets at amortized cost. The Company hold the assets to collect contractual cash flows and these cash flows consist solely of payments of principal and interest on the principal amount outstanding.

Other financial assets at amortized cost has been measured continuously at amortized cost.

KakaoBank of Korea Corp.
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(iv) Available-for-sale securities classified as fair value through other comprehensive income

Debt securities recognized as available for sale were reclassified from available for sale to fair value through other comprehensive income, as the Company's business model is achieved both by collecting contractual cash flows and selling of these assets. The contractual cash flows of these investments are solely principal and interest.

(v) Reclassifications of financial instruments on adoption of Korean IFRS 1109

On the date of initial application, January 1, 2018, the financial instruments of the Company with any reclassifications noted, were as follows:

(in Korean won)	Measurement category		Carrying amount		
	Korean IFRS 1039	Korean IFRS 1109	Korean IFRS 1039	Korean IFRS 1109	Difference
Due from financial institutions	Loans and receivables	Amortized costs	₩ 420,851,159,875	₩ 420,851,159,875	₩ -
Loans ¹	Loans and receivables	Amortized costs	4,639,922,956,516	4,639,922,956,516	-
Other financial assets ¹	Loans and receivables	Amortized costs	158,099,124,437	158,099,124,437	-
Debt instruments	Available-for-sale financial assets	Fair value through other comprehensive income	308,944,443,539	308,944,443,539	-
Debt instruments	Held-to-maturity financial assets	Amortized costs	214,704,380,106	214,704,380,106	-

¹ Before netting of allowance

(b) Impairment of Financial Assets

The Company has three types of financial assets subject to Korean IFRS 1109's new expected credit loss model:

- loans, and
- debt investments carried at fair value through other comprehensive income, and
- debt investments carried at amortized cost

Upon adoption of Korean IFRS 1109, accounting policies for recognition of impairment have changed. The impact of the change in impairment methodology on the Company's beginning balance of retained earnings is disclosed in the table on (a) above.

(i) Loans

Loss allowance for loans is recognized according to the expected credit loss impairment model.

Under Korean IFRS 1109, the allowance for loans is measured at the amount of 12-month expected credit losses or lifetime expected credit losses depending on whether credit risk has

KakaoBank of Korea Corp.
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increased significantly after initial recognition by three stages in the table below.

Stage	Loss allowance
1 No significant increase in credit risk after initial recognition	12-month expected credit losses (expected credit losses that result from those default events on the financial instrument that are possible within 12 months after the reporting date)
2 Significant increase in credit risk after initial recognition	Lifetime expected credit losses (expected credit losses that result from all possible default events over the life of the financial instrument)
3 Credit-impaired	

Under Korean IFRS 1109, the asset that is credit-impaired at initial recognition only would recognize the cumulative changes in lifetime expected credit losses since the initial recognition as a loss allowance.

(ii) Debt instrument

Provision for losses is recognized as 12-month expected credit losses since the debt instruments measured at amortized cost or fair value through other comprehensive income with investment grade are considered to have low credit risk.

29.2 Adoption of Korean IFRS 1115 Revenue from Contracts with Customers

As explained in Note 3, the Company has applied Korean IFRS 1115 *Revenue from contracts with customers* from January 1, 2018. In accordance with the transitional provisions in Korean IFRS 1115, comparative figures have not been restated. The application of Korean IFRS 1115 has following impacts on the financial statements.

There is no restated amount that is reflected on the Company's statements of financial position at the date of initial application.

There is no impact on the Company's retained earnings at the date of initial application.

Financial statement line items affected by the adoption of the new accounting standard in the current period are as follows:

Statements of comprehensive income

<i>(in Korean won)</i>	Reported amount	Adjustments	Amount before application of Korean IFRS 1115
Fee and commission income	₩ 67,926,349,479	₩ (26,021,680,812)	₩ 93,948,030,291
Fee and commission expenses	127,621,960,703	(26,021,680,812)	153,643,641,515

KakaoBank of Korea Corp.
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The reason for significant changes to the statement of comprehensive income for the year ended December 31, 2018, is as follows:

(i) Accounting for debit card rewards

Under the previous standard, the merchant agreement and card member agreement were accounted for as a separate agreement with each independent entity, and therefore the fee and commission income received from the merchant and the reward paid to the card holder were presented as the gross amount respectively.

Under Korean IFRS 1115, cash amounts that the company pays, or expects to pay, to the customer (or to other parties that purchase the company's goods or services from the customer) are considered as consideration payable to a customer. An entity shall account for the consideration payable to a customer as a reduction of revenue unless the payment to the customer is in exchange for a distinct good or service. Accordingly, the Company accounts for the reward paid to the card holder as a reduction of the fee and commission income received from the merchant.

**Report on Independent Auditor's
Review of Internal Control over Financial Reporting**

To the President of
KakaoBank of Korea Corp.

We have reviewed the accompanying management's report on the effectiveness of the Internal Control over Financial Reporting ("ICFR") of KakaoBank of Korea Corp. (the "Company") as of December 31, 2018. The Company's management is responsible for designing and operating ICFR and for its assessment of the effectiveness of ICFR. Our responsibility is to review the management's report on the effectiveness of the ICFR and issue a report based on our review. The management's report on the effectiveness of the ICFR of the Company states that "Based on the assessment results, President and ICFR Officer believe that no material weakness has been identified as at December 31, 2018, in all material respects, in conformity with the Best Practice Guideline."

Our review was conducted in accordance with the ICFR review standards established by the Korean Institute of Certified Public Accountants. Those standards require that we plan and perform, in all material respects, the review of management's report on the effectiveness of the ICFR to obtain a lower level of assurance than an audit. A review is to obtain an understanding of a company's ICFR and consists principally of inquiries of management and, when deemed necessary, a limited inspection of underlying documents, which is substantially less in scope than an audit.

A company's ICFR is a system to monitor and operate those policies and procedures designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards as adopted by the Republic of Korea. Because of its inherent limitations, ICFR may not prevent or detect a material misstatement of the financial statements. 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.

Based on our review, nothing has come to our attention that causes us to believe that management's report on the effectiveness of the ICFR, referred to above, is not presented fairly, in all material respects, in accordance with the Best Practice Guideline.

Our review is based on the Company's ICFR as of December 31, 2018, and we did not review management's assessment of its ICFR subsequent to December 31, 2018. This report has been prepared pursuant to the Acts on External Audit for Stock Companies, etc. in Korea and may not be appropriate for other purposes or for other users.

Samil PricewaterhouseCoopers

Samil PricewaterhouseCoopers

February 26, 2019

Report on the Effectiveness of the Internal Control over Financial Reporting

To the Shareholders, Board of Directors and Auditor (Audit Committee) of
KakaoBank of Korea Corp.

We, as the President and the Internal Control over Financial Reporting(“ICFR”) Officer of
KakaoBank of Korea Corp. (“the Company”), assessed the effectiveness of the design and
operation of the Company’s Internal Control over Financial Reporting for the year ended
December 31, 2018.

The Company’s management, including ourselves, is responsible for designing and
operating ICFR. We assessed the design and operating effectiveness of the ICFR in the
prevention and detection of an error or fraud which may cause material misstatements in the
preparation and disclosure of reliable financial statements. We followed the ‘Best Practice
Guideline’ which is established by the Operating Committee of Internal Control over Financial
Reporting in Korea (the “ICFR Committee”) to evaluate the effectiveness of the ICFR design
and operation.

Based on the assessment results, we believe that the Company’s ICFR, as at December 31,
2018, is designed and operating effectively, in all material respects, in conformity with the
Best Practice Guideline.

We certify that this report does not contain any untrue statement of a fact, or omit to state a
fact necessary to be presented herein. We also certify that this report does not contain or
present any statement which cause material misunderstandings, and we have reviewed and
verified this report with sufficient due care.

January 21, 2019

Lee Yongwoo, Co-President

Yoon Hoyeong, Co-President

Yoo Hobeom, Internal Control over Financial Reporting Officer