

Consolidated Financial Statements

December 31, 2019 and 2018

(With Independent Auditors' Report Thereon)

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Independent Auditors' Report

(Based on a report originally issued in Korean)

To the Board of Directors and Stockholder of Shinhan Bank:

Opinion

We have audited the consolidated financial statements of Shinhan Bank and its subsidiaries ("the Group"), which comprise the consolidated statements of financial position as of December 31, 2019 and 2018, the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2019 and 2018, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

Basis for Opinion

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

Other Matter

The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

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

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

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

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

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

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

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

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used in the preparation of the consolidated financial statements and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

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

KPMG Samjong Accounting Corp. Seoul, Korea March 4, 2020

This report is effective as of March 4, 2020, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

Consolidated Statements of Financial Position

As of December 31, 2019 and 2018

(In millions of won)	Notes		December 31, 2019	December 31, 2018
Assets				
Cash and due from banks	3,6,9,39,40	W	24,049,832	13,150,277
Securities at fair value through profit or loss	3,7,40,42		18,716,147	15,612,433
Derivative assets	3,8,40,42		2,101,993	1,484,458
Loans at amortized cost	3,9,18,40,42		268,172,264	251,233,806
Loans at fair value through profit or loss	3,9		868,991	645,237
Securities at fair value through other				
comprehensive income	3,10,18,42		40,655,905	31,878,348
Securities at amortized cost	3,10,18,42		20,251,888	16,824,400
Property and equipment	5,11,12,17,18		2,465,289	2,014,412
Intangible assets	5,13		656,349	316,229
Investments in associates	14		128,179	109,742
Investment properties	5,15		635,520	571,293
Current tax assets	36		31,312	43,026
Deferred tax assets	36		243,104	222,766
Other assets	3,9,16,40,43		13,734,418	14,409,627
Non-current assets held for sale	17		11,853	7,561
Total assets		W	392,723,044	348,523,615
Liabilities				
Deposits	3,19,40	₩	287,615,269	257,892,724
Financial liabilities at fair value				
through profit or loss	3,20		508,081	479,559
Derivative liabilities	3,8,40,42		1,893,832	1,771,585
Borrowings	3,21,39,40		17,325,884	16,154,821
Debt securities issued	3,22,39		38,029,868	31,899,266
Defined benefit liabilities	23		56,168	70,649
Provisions	24,38,40		269,065	284,716
Current tax liabilities	36		398,629	319,428
Deferred tax liabilities	36		30,069	23,480
Other liabilities	3,12,25,40,43		20,503,064	15,434,848
Total liabilities		_	366,629,929	324,331,076
Equity				
Capital stock	26		7,928,078	7,928,078
Hybrid bonds	26		997,987	698,660
Capital surplus	26		403,164	403,164
Capital adjustments	26,36		(2,480)	646
Accumulated other comprehensive loss	26,36		(403,031)	(606,697)
Retained earnings	26,27		17,162,995	15,762,751
Total equity attributable to equity holder of			26.006.712	24 197 702
Shinhan Bank	26		26,086,713	24,186,602
Non-controlling interests	26	_	6,402	5,937
Total equity			26,093,115	24,192,539
Total liabilities and equity		₩_	392,723,044	348,523,615

Consolidated Statements of Comprehensive Income For the years ended December 31, 2019 and 2018

(In millions of won)	Notes		2019	2018
Interest income	Z	W	10,654,732	9,596,725
Financial assets at fair value through profit or loss			306,528	234,031
Financial assets at fair value through				0.000
other comprehensive income and amortized cost			10,348,204	9,362,694
Interest expense		_	(4,782,945)	(4,010,731)
Net interest income	3,5,28,40,42	_	5,871,787	5,585,994
Fees and commission income			1,367,547	1,257,752
Fees and commission expense			(250,155)	(221,219)
Net fees and commission income	3,5,29,40,42		1,117,392	1,036,533
Dividend income	30,42		14,955	15,662
Net gain on financial assets at fair value through	30,42		1 1,555	13,002
profit or loss	31		233,897	358,511
Net foreign currencies transaction gain			317,965	141,745
Net gain on disposal of financial asset at fair value				
through other comprehensive income	10		107,633	16,387
Provision for credit loss allowance	3,9,40		(376,868)	(243,139)
General and administrative expenses	32,40		(3,142,406)	(3,061,786)
Net other operating expenses	5,34,40		(881,052)	(685,221)
Operating income		_	3,263,303	3,164,686
Net non-operating expenses	5,35		(185,630)	(17,305)
Share of loss of associates	5,14	_	(763)	(977)
Profit before income tax	5	_	3,076,910	3,146,404
Income tax expense	5,36		(747,642)	(867,042)
Profit for the year	5,27	_	2,329,268	2,279,362

Consolidated Statements of Comprehensive Income (Continued) For the years ended December 31, 2019 and 2018

(In millions of won, except for earnings per share)	Notes		2019	2018	
Other comprehensive income (loss) for the year:					
Items that are or may be reclassified					
subsequently to profit or loss					
Foreign currency translation differences for foreign					
operations			97,600	21,299	
Unrealized net change in fair value of financial assets			,	,	
at fair value through other comprehensive income			117,219	87,074	
Share of other comprehensive income (loss) of					
associates			3,305	(1,754)	
			218,124	106,619	
Items that will not be reclassified subsequently to					
profit or loss					
Remeasurements of defined benefit plans			(27,712)	(70,399)	
Unrealized net change in fair value of financial assets			7 00 7	15 (50	
at fair value through other comprehensive income			7,985	17,670	
Share of other comprehensive income of associates		_	(10.707)	(52.715)	
Other community in community the community			(19,727)	(52,715)	
Other comprehensive income for the year, net of income tax	3,26,36		198,397	53,904	
net of income tax	3,20,30	_	190,397	33,904	
Total comprehensive income for the year		₩	2,527,665	2,333,266	
					
Profit attributable to:	5				
Equity holder of Shinhan Bank	3	₩	2,329,192	2,279,049	
Non-controlling interests			76	313	
Profit for the year		₩ -	2,329,268	2,279,362	
Total comprehensive income attributable to:		·· =	2,527,200	2,279,302	
Equity holder of Shinhan Bank		W	2,527,200	2,332,943	
Non-controlling interests		• •	465	323	
Total comprehensive income for the year		w -	2,527,665	2,333,266	
•		_			
Earnings per share:	37				
Basic and diluted earnings per share in won		₩	1,448	1,421	

Consolidated Statements of Changes in Equity For the year ended December 31, 2018

(In millions of won)		Accumulated							NT.	
			Hybrid	Capital	Capital	other comprehensive	Retained		Non- controlling	
		Capital stock	bonds	surplus	adjustments	income (loss)	earnings	Sub-total	interests	Total
Balance at January 1, 2018	W	7,928,078	668,938	403,164	(3,307)	(663,793)	14,052,132	22,385,212	4,880	22,390,092
Total comprehensive income (loss), net										
of income tax										
Profit for the year		-	-	-	-	-	2,279,049	2,279,049	313	2,279,362
Foreign currency translation differences for						21 277		21 277	22	21 200
foreign operations Unrealized net changes in fair values of		-	-	-	-	21,277	-	21,277	22	21,299
available-for-sale financial assets		-	_	-	-	107,944	(3,189)	104,755	(11)	104,744
Share of other comprehensive loss of associates		-	-	-	-	(1,727)	(13)	(1,740)	-	(1,740)
Remeasurements of defined benefit plans		<u> </u>	<u>-</u> ,_		_	(70,398)	-	(70,398)	(1)	(70,399)
Total comprehensive income for the year						57,096	2,275,847	2,332,943	323	2,333,266
Transactions with owners, recognized directly										
in equity										
Annual dividends to equity holder		-	-	-	-	-	(540,000)	(540,000)	-	(540,000)
Dividends to hybrid bond holders		-	-	-	-	-	(25,228)	(25,228)	-	(25,228)
Issuance of hybrid bonds		-	199,547	-	-	-	-	199,547	-	199,547
Redemption of hybrid bonds		-	(169,825)	-	(175)	-	-	(170,000)	-	(170,000)
Share-based payment transactions		-	-	-	4,128	-	-	4,128	_	4,128
Capital investment in subsidiaries		-	-	-	-	-	-	-	734	734
Total transactions with owners			29,722		3,953		(565,228)	(531,553)	734	(530,819)
Balance at December 31, 2018	₩	7,928,078	698,660	403,164	646	(606,697)	15,762,751	24,186,602	5,937	24,192,539

See accompanying notes to the consolidated financial statements.

Consolidated Statements of Changes in Equity (Continued) For the year ended December 31, 2019

		Attributable to equity holder of Shinhan Bank								
(In millions of won)						Accumulated other			Non-	
		Capital stock	Hybrid bonds	Capital surplus	Capital adjustments	comprehensive income (loss)	Retained earnings	Sub-total	controlling interests	Total
Balance at January 1, 2019	W	7,928,078	698,660	403,164	646	(606,697)	15,762,751	24,186,602	5,937	24,192,539
Total comprehensive income (loss), net of income tax										
Profit for the year		-	-	-	-	-	2,329,192	2,329,192	76	2,329,268
Foreign currency translation differences for foreign operations		-	-	-	-	97,223	-	97,223	377	97,600
Unrealized net changes in fair values of financial assets at fair value through other comprehensive income		-	-	-	-	130,851	(5,658)	125,193	11	125,204
Share of other comprehensive income of associates		-	-	-	-	3,305	-	3,305	-	3,305
Remeasurements of defined benefit plans						(27,713)		(27,713)	1	(27,712)
Total comprehensive income for the year						203,666	2,323,534	2,527,200	465	2,527,665
Transactions with owners, recognized directly in equity										
Annual dividends to equity holder		-	-	-	-	-	(890,000)	(890,000)	-	(890,000)
Dividends to hybrid bond holders		-	-	-	-	-	(33,115)	(33,115)	-	(33,115)
Issuance of hybrid bonds		-	299,327	-	-	-	-	299,327	-	299,327
Share-based payment transactions		-	-	-	(3,301)	-	-	(3,301)	-	(3,301)
Capital investment in subsidiaries		-	-	-	175	-	(175)	-	-	-
Total transactions with owners			299,327		(3,126)	_	(923,290)	(627,089)	-	(627,089)
Balance at December 31, 2019	W	7,928,078	997,987	403,164	(2,480)	(403,031)	17,162,995	26,086,713	6,402	26,093,115

See accompanying notes to the consolidated financial statements.

Consolidated Statements of Cash Flows For the years ended December 31, 2019 and 2018

(In millions of won)		2019	2018
Cash flows from operating activities			
Profit before income tax	W	3,076,910	3,146,404
Adjustments for:	• • •	3,070,510	2,1.0,.0.
Interest income		(10,654,732)	(9,596,725)
Interest expense		4,782,945	4,010,731
Dividend income		(14,955)	(15,662)
Net gain on financial assets at fair value through profit or loss		(74,768)	(253,832)
Net non-cash foreign currencies transaction loss (gain)		(3,797)	129,495
Net gain on sale of financial assets at fair value through other		(5,777)	,.,,
comprehensive income		(107,633)	(15,288)
Provision for credit loss allowance		376,868	245,218
Non-cash employee benefits		139,701	109,500
Depreciation and amortization		403,861	196,027
Net non-cash other operating expenses (income)		198,757	(40,419)
Share of loss of associates		763	977
Net non-cash non-operating expenses (income)		143,390	(5,828)
· · · · · · · · · · · · · · · · · · ·	•	(4,809,600)	(5,235,806)
Changes in assets and liabilities:	•	(): ::): ::)	(=) = =)= = =)
Due from banks		(10,344,562)	6,571,282
Securities at fair value through profit or loss		(2,398,378)	(2,192,359)
Derivative assets		1,474,605	2,748,118
Loans at amortized cost		(16,870,906)	(22,536,002)
Loans at fair value through profit or loss		(222,565)	(34,732)
Other assets		836,198	(4,910,938)
Deposits		29,305,622	16,408,681
Financial liabilities at fair value through profit or loss		(60,255)	27,561
Derivative liabilities		(1,529,554)	(2,679,631)
Defined benefit liabilities		(181,499)	(94,396)
Provisions		(6,995)	19,817
Other liabilities		4,057,698	734,212
		4,059,409	(5,938,387)
In a come to a const. I		(767.520)	(500 1(5)
Income tax paid		(767,539)	(509,165)
Interest received		10,705,948	9,527,836
Interest paid		(4,673,694)	(4,143,026)
Dividends received	•	15,330	18,435
Net cash provided by (used in) operating activities		7,606,764	(3,133,709)

Consolidated Statements of Cash Flows (Continued) For the years ended December 31, 2019 and 2018

(In millions of won)	2019	2018
Cash flows from investing activities		
9	V 756,399	925,774
Acquisition of securities at fair value through profit or loss	(1,391,004)	(925,116)
Proceeds from sale of securities at fair value through	30,323,375	23,102,529
other comprehensive income	, ,	, ,
Acquisition of securities at fair value through	(38,987,337)	(23,603,810)
other comprehensive income	, , ,	, , , ,
Proceeds from sale of securities at amortized cost	6,394,739	1,846,933
Acquisition of securities at amortized cost	(9,692,417)	(3,751,191)
Proceeds from sale of property and equipment	13,110	35,907
Acquisition of property and equipment	(189,710)	(90,625)
Proceeds from sale of intangible assets	10,518	2,648
Acquisition of intangible assets	(222,006)	(93,282)
Proceeds from sale of investments in associates	5,082	10,944
Acquisition of investments in associates	(15,253)	(21,377)
Proceeds from sale of investment properties	-	15,274
Acquisition of investment properties	(2,771)	(1,132)
Proceeds from sale of non-current assets held for sale	137	3,175
Proceeds from sale of other assets	793,935	945,794
Acquisition of other assets	(787,462)	(944,869)
Net cash used in investing activities	(12,990,665)	(2,542,424)
Cash flows from financing activities		
Proceeds from borrowings, net	943,540	1,134,388
Proceeds from issuance of debt securities	17,697,533	14,749,462
Repayment of debt securities	(12,047,639)	(8,271,552)
Dividends paid	(925,712)	(563,999)
Issuance of hybrid bonds	299,327	199,547
Redemption of hybrid bonds	,	(170,000)
Acquisition of other liabilities	142,537	95,415
Proceeds from sale of other liabilities	(348,417)	(94,621)
Contribution from non-controlling interests	(e 10,111) -	734
Net cash provided by financing activities	5,761,168	7,079,374
1 , 9		
Effect of exchange rate fluctuations on cash and cash		
equivalents held	28,297	(29,174)
Net increase in cash and cash equivalents	405,565	1,374,067
Cash and cash equivalents at beginning of the year (Note 39)	6,704,953	5,330,886
Cash and cash equivalents at end of the year (Note 39)	V 7,110,517	6,704,953

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

1. Reporting entity

Shinhan Bank (the "Bank"), the controlling company, is headquartered at 20, Sejong-daero 9-gil, Jung-gu, Seoul, Republic of Korea. The accompanying consolidated financial statements consist of the Bank and subsidiaries (collectively referred to as "the Group"), and equity interests in associates and joint ventures of the Group.

(a) Controlling company

The Bank was established on October 1, 1943 under the name of Chohung Bank, through the merger of Hanseung Bank and Dongil Bank, which were established on February 19, 1897 and August 8, 1906, respectively, to engage in commercial banking and trust operations.

The Bank acquired Chungbuk Bank and Kangwon Bank in 1999, and the former Shinhan Bank on April 1, 2006, and subsequently changed its name to Shinhan Bank. As of December 31, 2019, the Bank has 1,585,615,506 outstanding common shares with par value of \(\pm 7,928,078\) million which is 100% owned Shinhan Financial Group Co., Ltd. ("Shinhan Financial Group"). As of December 31, 2019, the Bank operates through 737 domestic branches, 139 depository offices, 29 premises and 14 overseas branches.

(b) Subsidiaries included in consolidation

Details of ownerships in subsidiaries as of December 31, 2019 and 2018 were as follows:

				Ownership (%)				
Subsidiaries	Location	Fiscal year-end	Sector	December 31, 2019	December 31, 2018			
Shinhan Asia	Hong Kong	December	Wholesale finance	99.99	99.99			
Shinhan America	U.S.A	December	Banking	100.00	100.00			
Shinhan Europe	Germany	December	Banking	100.00	100.00			
Shinhan Cambodia	Cambodia	December	Banking	97.50	97.50			
Shinhan Kazakhstan	Kazakhstan	December	Banking	100.00	100.00			
Shinhan Canada	Canada	December	Banking	100.00	100.00			
Shinhan China	China	December	Banking	100.00	100.00			
Shinhan Japan	Japan	March	Banking	100.00	100.00			
Shinhan Vietnam	Vietnam	December	Banking	100.00	100.00			
Shinhan Mexico	Mexico	December	Banking	99.99	99.99			
Shinhan Indonesia	Indonesia	December	Banking	99.00	99.00			

i) Shinhan Asia Ltd.

Shinhan Asia Ltd. ("Shinhan Asia") engages in merchant banking activities in Hong Kong. As of December 31, 2019, Shinhan Asia's capital stock amounted to USD 100 million.

ii) Shinhan Bank America

Shinhan Bank America ("Shinhan America") was established on March 24, 2003 through the merger of Chohung Bank of New York and California Chohung Bank. As a result of rights offering during the year ended December 31, 2018, Shinhan America's capital stock amounted to USD 173 million as of December 31, 2019.

iii) Shinhan Bank Europe GmbH

Shinhan Bank Europe GmbH ("Shinhan Europe") was established in 1994. As of December 31, 2019, Shinhan Europe's capital stock amounted to EUR 63 million by capital increase without consideration.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

1. Reporting entity (continued)

(b) Subsidiaries included in consolidation (continued)

iv) Shinhan Bank Cambodia

Shinhan Cambodia Bank PLC ("Shinhan Cambodia") was established on October 15, 2007. Shinhan Bank Cambodia was renamed from Shinhan Cambodia Bank PLC in the year ended December 31, 2018. As a result of rights offering during the year ended December 31, 2018, Shinhan Cambodia's capital stock amounted to USD 75 million as of December 31, 2019.

v) Shinhan Bank Kazakhstan Limited

Shinhan Bank Kazakhstan Limited ("Shinhan Kazakhstan") was established on December 16, 2008. As of December 31, 2019, Shinhan Kazakhstan's capital stock amounted to KZT 10,029 million.

vi) Shinhan Bank Canada

Shinhan Bank Canada ("Shinhan Canada") was established on March 9, 2009. As of December 31, 2019, Shinhan Canada's capital stock amounted to CAD 80 million.

vii) Shinhan Bank China Limited

Shinhan Bank China Limited ("Shinhan China") was established on May 12, 2008. As of December 31, 2019, Shinhan China's capital stock amounted to CNY 2,000 million.

viii) Shinhan Bank Japan

Shinhan Bank Japan ("Shinhan Japan") was established on September 14, 2009. As a result of rights offering during the year ended December 31, 2018, Shinhan Japan's capital stock amounted to JPY 17,500 million as of December 31, 2019.

ix) Shinhan Bank Vietnam Ltd.

Shinhan Bank Vietnam Ltd. ("Shinhan Vietnam") was established on November 16, 2009 and merged with Shinhan Vina Bank on November 28, 2011. On December 17, 2017, Shinhan Vietnam acquired the retail business of ANZ Vietnam. As a result of rights offering during the year ended December 31, 2019, Shinhan Vietnam's capital stock amounted to VND 5,709,900 million as of December 31, 2019.

x) Banco Shinhan de Mexico

Banco Shinhan de Mexico ("Shinhan Mexico") was established on October 12, 2015 for obtaining the authorization of banking business. As a result of the rights offering during the year ended December 31, 2018, Shinhan Mexico's issued capital stock amounted to MXN 1,583 million as of December 31, 2019.

xi) PT Bank Shinhan Indonesia

On November 30, 2015, the Bank acquired 97.76% of voting share and obtained the control of PT Bank Metro Express, which was established on September 8, 1967 and is engaged in the banking business. PT Bank Metro Express was renamed as PT Bank Shinhan Indonesia ("Shinhan Indonesia") in 2016 and merged PT Centratama Nasional Bank, a former subsidiary of the Bank, on December 6, 2016. As of December 31, 2019, Shinhan Indonesia's capital stock amounted to IDR 944,278 million.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

1. Reporting entity (continued)

(c) Subsidiaries included in consolidation (continued)

In addition, structured entities included in consolidation as of December 31, 2019 were as follows:

Characterist and disco	I4:	Fiscal period-end
Structured entities MDC Vylohom Croon 1st	Location Korea	(month)
MPC Yulchon Green 1st		3/6/9/12
MPC Yulchon 2nd	Korea	3/6/9/12
MPC Yulchon 1st	Korea	3/6/9/12
Shinhan-S-Russell Co., Ltd.	Korea	3/6/9/12
Sunny More 5th Co., Ltd.	Korea	2/5/8/11
Sunny Dream 7th Co., Ltd.	Korea	10
Sunny Russell 8th Co., Ltd.	Korea	12
Shinhan-Daesung Contents Fund	Korea	12
Sunny Russell 1st Co., Ltd.	Korea	2
Sunny Russell 4th L.L.C	Korea	12
Sunny Russell 5th Co., Ltd.	Korea	12
S-smart 9th Co., Ltd.	Korea	12
Sunny Smart 2nd Co., Ltd.	Korea	12
Tiger Eyes 3rd Co., Ltd.	Korea	12
Sunny Smart 5th Co., Ltd.	Korea	2/5/8/11
Tiger Eyes 1st Co., Ltd.	Korea	1 / 4 / 7 / 10
S-solution 2nd Co., Ltd.	Korea	2/5/8/11
S-solution 3rd Co., Ltd.	Korea	2/5/8/11
Shinhan Display 1st Co., Ltd.	Korea	1 / 4 / 7 / 10
S-solution 9th Co., Ltd.	Korea	10
SH inno 1st Co., Ltd.	Korea	3 / 6 / 9 / 12
Sunny solution 2nd Co., Ltd.	Korea	11
Sunny Dream 1st Co., Ltd.	Korea	7
Sunny solution 3rd Co., Ltd.	Korea	1 / 4 / 7 / 10
Shinhan Display 2nd Co., Ltd.	Korea	1 / 4 / 7 / 10
Sunny solution 4th Co., Ltd.	Korea	3 / 6 / 9 / 12
Redefine Unjung Co., Ltd.	Korea	1 / 4 / 7 / 10
Sunny solution 9th Co., Ltd.	Korea	2/5/8/11
Sunny solution 10th Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB portfolio a 1st Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB portfolio a 3rd Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB portfolio a 4th Co., Ltd.	Korea	1 / 4 / 7 / 10
S-redefine 3rd Co., Ltd.	Korea	7
S-Tiger 2nd Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB harim Co., Ltd.	Korea	3/6/9/12
Maestro Werye 1st Co., Ltd.	Korea	3/6/9/12
S-redefine 4th Co., Ltd.	Korea	9
Rich gate 1st Co., Ltd.	Korea	3/6/9/12
Grand bene Co., Ltd.	Korea	3/6/9/12
S redefine 7th Co., Ltd.	Korea	3/6/9/12
GIB han 1st corp.	Korea	3/6/9/12
Rich gate 9th corp.	Korea	3/6/9/12
Rich gate 11th corp.	Korea	3/6/9/12
Sunny Financial 10th Co., Ltd.	Korea	1/4/7/10
GIB sol 1st corp.	Korea	2/5/8/11
Rich gate 8th corp.	Korea	3/6/9/12
Rich gate 12th corp.	Korea	1/4/7/10
Rich gate 13th corp.	Korea	2/5/8/11
Maestro ER Co., Ltd.	Korea	3 / 6 / 9 / 12

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

1. Reporting entity (continued)

(c) Subsidiaries included in consolidation (continued)

		Fiscal period-end
Structured entities	Location	(month)
GIB CSI Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB DM Co., Ltd.	Korea	3 / 6 / 9 / 12
Rich gate 14th corp.	Korea	3 / 6 / 9 / 12
Maestro mirae Co., Ltd.	Korea	3 / 6 / 9 / 12
MAESTRO ST Co., Ltd.	Korea	12
GIB time 1st	Korea	1 / 4 / 7 / 10
AR plus 1st	Korea	3 / 6 / 9 / 12
MAESTRO SP Co., Ltd.	Korea	1 / 4 / 7 / 10
MAESTRO BIZON Co., Ltd.	Korea	2/5/8/11
GIB AIR Co., Ltd.	Korea	2/5/8/11
S-Tiger 5th Co., Ltd.	Korea	2/5/8/11
MAESTRO S.I Co., Ltd.	Korea	2/5/8/11
S REDIFINE 10th Co., Ltd.	Korea	1 / 4 / 7 / 10
S-Tiger 6th Co., Ltd.	Korea	3 / 6 / 9 / 12
Maestro gongdeok Co., Ltd.	Korea	3 / 6 / 9 / 12
Maestro LEC Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB Palace Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB DAEMYUNG 1st Co., Ltd.	Korea	1 / 4 / 7 / 10
S-Tiger 8th Co., Ltd.	Korea	1 / 4 / 7 / 10
MAESTRO S.A Co., Ltd.	Korea	1 / 4 / 7 / 10
GIB YOUNGSAN 1st Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB YOUNGSAN 2nd Co., Ltd.	Korea	3 / 6 / 9 / 12
GIB hoban 1st	Korea	12
GIB LAB 2nd Co., Ltd.	Korea	9
Development Trust	Korea	12
Non-specified Money Trust	Korea	12
Old-age Living Pension Trust	Korea	12
New-Personal Pension Trust	Korea	12
Personal Pension Trust	Korea	12
Retirement Trust	Korea	12
New Old-age Living Pension Trust	Korea	12
Pension Trust	Korea	12
Household Money Trust (Shinhan)	Korea	12
Corporation Money Trust (Shinhan)	Korea	12
Shinhan BNPP Private Corporate 25th	Korea	1

The Group consolidates a structured entity when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to most significantly affect those returns through its power over the structured entity based on the terms in the agreement relating to the establishment of the structured entity. For consolidated structured entities, the Group recognizes non-controlling interests related to the structured entity as liabilities in the consolidated statement of financial position.

As of December 31, 2019, the Group provides Asset Backed Commercial Paper (ABCP) purchase agreement amounting to \(\pi_3,766,311\) million to the structured entities described above.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

1. Reporting entity (continued)

(d) Changes in subsidiaries

Newly included subsidiaries during the year ended December 31, 2019

Subsidiaries

GIB han 1st corp.

Rich gate 9th corp.

Rich gate 11th corp.

Sunny Financial 10th Co., Ltd.

GIB sol 1st corp.

Rich gate 8th corp.

Rich gate 12th corp.

Rich gate 13th corp.

Maestro ER Co., Ltd.

GIB CSI Co., Ltd.

GIB DM Co., Ltd.

Rich gate 14th corp.

Maestro mirae Co., Ltd.

MAESTRO ST Co., Ltd.

GIB time 1st

AR plus 1st

MAESTRO SP Co., Ltd.

MAESTRO BIZON Co., Ltd.

GIB AIR Co., Ltd.

S-Tiger 5th Co., Ltd.

MAESTRO S.I Co., Ltd.

S REDIFINE 10th Co., Ltd.

S-Tiger 6th Co., Ltd.

Maestro gongdeok Co., Ltd.

Maestro LEC Co., Ltd.

GIB Palace Co., Ltd.

Consus SGrail Specialized Private Special Asset Investment Trust GIB DAEMYUNG 1st Co., Ltd.

S-Tiger 8th Co., Ltd.

MAESTRO S.A Co., Ltd.

GIB YOUNGSAN 1st Co., Ltd.

GIB YOUNGSAN 2nd Co., Ltd.

GIB hoban 1st

GIB LAB 2nd Co., Ltd.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

during the year ended December 31, 2019

1. Reporting entity (continued)

Excluded subsidiaries

(d) Changes in subsidiaries (continued)

Sunny Financial 1st Co., Ltd. Sunny Financial 2nd Co., Ltd. Sunny Smart 1st Co., Ltd. Sunny Smart 5th Co., Ltd. Sunny Smart 6th Co., Ltd. Sunny solution 6th Co., Ltd. GIB portfolio a 2nd Co., Ltd. Sunny Financial 9th Co., Ltd. Sunny More 3rd Co., Ltd. Sunny More 1st Co., Ltd. Sunny More 2nd Co., Ltd. Sunny Smart 8th Co., Ltd. Sunny More 10th Co., Ltd. CGN YULCHON 2nd Co., Ltd. Sunny Smart 10th Co., Ltd. Sunny solution 4th Co., Ltd. Sunny solution 5th Co., Ltd. Sunny solution 7th Co., Ltd. S-Nuri 1st Co., Ltd. GPS 11th Ltd. Sunny Dream 4th L.L.C Sunny Dream 9th L.L.C Sunny Dream 5th Co., Ltd. Sunny Russell 3rd L.L.C Sunny Russell 6th Co., Ltd. Sunny smart 3rd Co., Ltd. Shinhan serveone 1st Co., Ltd. Sunny solution 1st Co., Ltd.

GIB portfolio a 5th Co., Ltd.
GIB dochuck Co., Ltd.
Consus SGrail Specialized Private Special Asset Investment Trust

Subsidiaries

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies

(a) Statement of compliance

The consolidated financial statements have been prepared in accordance with Korean International Financial Reporting Standards ("K-IFRS"), as prescribed in *the Act on External Audit of Stock Companies*.

The Group's consolidated financial statements have been prepared in accordance with the accounting policies stated below.

(b) Basis of measurement

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

- · derivative financial instruments are measured at fair value
- · financial instruments at fair value through profit or loss ("FVTPL") are measured at fair value
- financial instruments at fair value through other comprehensive income ("FVOCI") are measured at fair value
- · share-based payment arrangements are initially measured at fair value on grant date
- changes in fair value attributable to the risk being hedged for financial instruments designated as hedged items in qualifying fair value hedge relationships are recognized in profit or loss
- liabilities for defined benefit plans are recognized as net of the total present value of defined benefit obligations less the fair value of plan assets

(c) Functional and presentation currency

The respective financial statements of the Group entities are prepared in the functional currency of the respective operation. These consolidated financial statements are presented in Korean won, which is the Bank's functional currency and the currency of the primary economic environment in which the Group operates. Subsidiaries whose functional currency is not Korean won were as follows:

Functional currency	Subsidiaries	
USD	Shinhan Asia, Shinhan America, Shinhan Cambodia	
EUR	Shinhan Europe	
KZT	Shinhan Kazakhstan	
CAD	Shinhan Canada	
CNY	Shinhan China	
JPY	Shinhan Japan	
VND	Shinhan Vietnam	
MXN	Shinhan Mexico	
IDR	Shinhan Indonesia	

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(d) Use of estimates and judgements

The preparation of the consolidated financial statements in conformity with K-IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Information about significant areas of estimation uncertainty and critical judgements in applying accounting policies that have the significant effect on the amount recognized in the consolidated financial statements is described in Note 4.

The Group recognizes credit loss allowance for expected credit losses on debt instruments, loans and receivables that are measured at amortized cost or at FVOCI, loan commitments and financial guarantee contracts upon adoption of K-IFRS No.1109, 'Financial Instruments'. The measurement of such allowance is determined by techniques, assumptions and input variables used by the Group to measure expected future cash flows of individual financial instruments and to measure expected credit losses in a collective manner. The details of techniques, assumptions and input variables used to measure the credit loss allowance for expected credit losses as of December 31, 2019 are described in Note 3.

(e) Changes in accounting policies

In preparing these consolidated financial statements, the significant judgments made by management in applying the Group's accounting policies and the key sources of estimation uncertainty are the same as those that applied to the consolidated financial statements as of and for the year ended December 31, 2018 except for the application of the revised Standard, which applies for the first time on January 1, 2019, as described below. There are other accounting standards that will take effect on January 1, 2019, but they have no significant impact on the consolidated financial statements.

a) Amendments to K-IFRS No.1109, 'Financial Instruments', K-IFRS No.1107, 'Financial Instruments: Disclosures'

The interest rate index reform has added an exception that allows hedge accounting to be applied while uncertainty exists. In a hedging relationship, it is assumed that the interest rate index underlying cash flows is not changed by the interest rate index reform when reviewing the occurrence of forecast transaction and the prospective assessment of the hedge effectiveness. For hedges of non-contractually specified interest rate risk components, the requirement that the hedged risk should be separately identifiable applies only at the inception of the hedging relationship. Through the interest rate index reform, this application of exception is ended when the timing and amount of cash flows based on the interest rate index will no longer appear, or the hedging relationship is discontinued. These amendments take effect on January 1, 2020 but have been applied early as early adoption is allowed. A significant interest rate indicator for hedging relationships is LIBOR and CD rates. The subject affected by this amendment is the hedge accounting as disclosed in Note 8.

b) K-IFRS No.1116, 'Leases'

K-IFRS No.1116, published on May 22, 2017, replaces existing standards including K-IFRS No.1017, 'Leases', K-IFRS No.2104, 'Determining whether an Arrangement contains a Lease', K-IFRS No.2015, 'Operating Leases - Incentives' and K-IFRS No.2027, 'Evaluating the Substance of Transactions Involving the Legal Form of a Lease'.

The Group has applied K-IFRS No.1116 from the year beginning on January 1, 2019, the date of initial application.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(e) Changes in accounting policies (continued)

At inception of a contract, the Group assessed whether the contract is, or contains, a lease, and identified whether the contract is, or contains, a lease in accordance with K-IFRS No.1116 at the date of initial application.

For a contract that is, or contains, a lease, a lessee or a lessor shall account for each lease component within the contract as a lease separately from non-lease components (hereinafter called 'non-lease components') of the contract.

A lessee shall recognize a lease right-of-use asset, which represents a lessee's right to use an underlying asset (leased asset) for the lease term, and a lease liability, which represents an obligation to make lease payments. However, a lessee may elect not to apply the requirements to short-term leases and leases for which the underlying asset is of low value. Also, the Group used the following practical expedients when applying K-IFRS No.1116 to leases previously classified as operating leases under K-IFRS No.1017.

- Elects not to apply the requirements to recognize lease right-of-use assets and lease liabilities to leases for which the lease term ends within 12 months of the date of initial application.
- Excludes initial direct costs from the measurements of the right-of-use assets at the date of initial application.
- If the contract contains an option to extend or terminate the lease, hindsight is used to determine the lease term.

The comparative consolidated statement of financial position of the Bank as of December 31, 2019, and the related consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes are prepared in accordance with K-IFRS No.1116. Also, the comparative consolidated financial statements as of December 31, 2018 and for the year ended December 31, 2018, have not been retrospectively restated according to the transition rules of K-IFRS No.1116.

The details of the right-of-use assets and lease liabilities resulting from the initial application of K-IFRS No.1116 are explained in Notes 12 and 44.

(f) Approval of consolidated financial statements

The consolidated financial statements were authorized for issue by the Board of Directors on February 4, 2020, which will be submitted for approval to the shareholders' meeting on March 25, 2020.

(g) Basis of consolidation

i) Subsidiaries

Subsidiaries are investees controlled by the Group. The Group controls an investee when it is exposed to, or has rights to, variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

If a member of the Group uses accounting policies other than those adopted in the consolidated financial statements for the same transactions and events in similar circumstances, appropriate adjustments are made to its financial statements in preparing the consolidated financial statements.

There is no non-controlling interest in structured entities because the ownership interests in structured entities are shown as liabilities of the Group.

ii) Intra-group transactions eliminated on consolidation

Intra-group balances, transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Intra-group losses are recognized as expense if intra-group losses indicate an impairment that requires recognition in the consolidated financial statements.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(g) Basis of consolidation (continued)

iii) Non-controlling interests

Non-controlling interests in a subsidiary are accounted for separately from the parent's ownership interests in a subsidiary. Each component of net profit or loss and other comprehensive income is attributed to the owners of the parent and non-controlling interest holders, even when the allocation reduces the non-controlling interests balance below zero.

(h) Business combinations

i) Business combinations

A business combination is accounted for by applying the acquisition method, unless it is a combination involving entities or businesses under common control.

Each identifiable asset and liability is measured at its acquisition-date fair value except for below:

- Leases and insurance contracts are required to be classified on the basis of the contractual terms and other factors
- Only those contingent liabilities assumed in a business combination that are a present obligation and can be measured reliably are recognized
- Deferred tax assets or liabilities are recognized and measured in accordance with K-IFRS No.1012, 'Income Taxes'
- Employee benefit arrangements are recognized and measured in accordance with K-IFRS No.1019, 'Employee Benefits'
- Indemnification assets are recognized and measured on the same basis as the indemnified liability or asset
- Reacquired rights are measured in accordance with special provisions
- Liabilities or equity instruments related to share-based payment transactions are measured in accordance with the method in K-IFRS No.1102, 'Share-based Payment'
- Non-current assets held for sale are measured at fair value less costs to sell in accordance with K-IFRS No.1105, 'Non-current Assets Held for Sale and Discontinued Operations'

As of the acquisition date, non-controlling interests in the acquiree are measured as the non-controlling interests' proportionate share of the acquiree's identifiable net assets.

The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the acquirer, the liabilities incurred by the acquirer to former owners of the acquiree and the equity interests issued by the acquirer. However, any portion of the acquirer's share-based payment awards exchanged for awards held by the acquiree's employee that is included in consideration transferred in the business combination shall be measured in accordance with the method described above rather than at fair value.

Acquisition-related costs are costs the acquirer incurs to effect a business combination. Those costs include finder's fees; advisory, legal, accounting, valuation and other professional or consulting fees; general administrative costs, including the costs of maintaining an internal acquisitions department; and costs of registering and issuing debt and equity securities. Acquisition-related costs, other than those associated with the issue of debt or equity securities, which are recognized in accordance with K-IFRS No.1032, 'Financial Instruments: Presentation' and K-IFRS No.1109, 'Financial Instruments', are expensed in the periods in which the costs are incurred and the services are received.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(h) Business combination (continued)

ii) Goodwill

The Group measures goodwill at the acquisition date as:

- the fair value of the consideration transferred; plus
- the recognized amount of any non-controlling interests in the acquiree; plus
- if the business combination is achieved in stages, the fair value of the pre-existing equity interest in the acquiree; less
- the net recognized amount (generally fair value) of the identifiable assets acquired and liabilities assumed.

When the excess is negative, a bargain purchase gain is recognized immediately in profit or loss.

When the Group additionally acquires non-controlling interest, the Group does not recognize goodwill since the transaction is regarded as equity transaction.

As part of its transition to K-IFRS, the Group elected to restate only those business combinations which occurred on or after January 1, 2010 in accordance with K-IFRS. In respect of acquisitions prior to January 1, 2010, goodwill is included on the basis of its deemed cost, which represents the amount recorded under previous Generally Accepted Accounting Principles ("GAAP").

(i) Investments in associates

An associate is an entity in which the Group has significant influence, but not control, over the entity's financial and operating policies. Significant influence is presumed to exist when the Group holds between 20 and 50 percent of the voting power of another entity.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

The investment in an associate and a joint venture is initially recognized at cost, and the carrying amount is increased or decreased to recognize the Group's share of the profit or loss and changes in equity of the associate and the joint venture after the date of acquisition. Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Intra-group losses are recognized as expense if intra-group losses indicate an impairment that requires recognition in the consolidated financial statements.

If an associate or a joint venture uses accounting policies different from those of the Group for like transactions and events in similar circumstances, appropriate adjustments are made to its financial statements in applying the equity method.

When the Group's share of losses exceeds its interest in an equity accounted investee, the carrying amount of that interest, including any long-term investments, is reduced to nil and the recognition of further losses is discontinued except to the extent that the Group has an obligation or has to make payments on behalf of the investee for further losses.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(j) Operating segments

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Group's other components, whose operating results are reviewed regularly by the chief operating decision maker to make decisions about resources allocated to each segment and assess its performance, and for which discrete financial information is available.

The segment reporting to a chief executive officer includes items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly general expenses and income tax assets and liabilities. The Group considers the Chief Executive Officer ("CEO") of the Bank as the chief operating decision maker.

(k) Foreign currencies

i) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of the Group at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency using the reporting date's exchange rate. The foreign currency gain or loss on monetary items is the difference between amortized cost in the functional currency at the beginning of the period, adjusted for effective interest and payments during the period, and the amortized cost in foreign currency translated at the exchange rate at the end of the reporting period. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined.

Foreign currency differences arising on retranslation are recognized in profit or loss, except for differences arising on the retranslation of available-for-sale equity instruments, a financial liability designated as a hedging instrument of the net investment in a foreign operation or a qualifying cash flow hedge, which are recognized in other comprehensive income. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

ii) Foreign operations

If the presentation currency of the Group is different from a foreign operation's functional currency, the financial statements of the foreign operation are translated into the presentation currency using the following methods:

The assets and liabilities of foreign operations, whose functional currency is not the currency of a hyperinflationary economy, are translated to presentation currency at exchange rates at the reporting date. The income and expenses of foreign operations are translated to functional currency at exchange rates at the dates of the transactions. Foreign currency differences are recognized in other comprehensive income.

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation are treated as assets and liabilities of the foreign operation and are translated using the exchange rate at the reporting date.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(k) Foreign currencies (continued)

When a foreign operation is disposed of, the relevant amount in the translation is transferred to profit or loss as part of the profit or loss on disposal. On the partial disposal of a subsidiary that includes a foreign operation, the relevant proportion of such cumulative amount is reattributed to non-controlling interest. In any other partial disposal of a foreign operation, the relevant proportion is reclassified to profit or loss.

iii) Net investment in a foreign operation

If the settlement of a monetary item receivable from or payable to a foreign operation is neither planned nor likely in the foreseeable future, then foreign currency differences arising on the item form part of the net investment in the foreign operation and are recognized in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment.

(1) Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits with original maturities of three months or less from the acquisition date that are subject to an insignificant risk of changes in their fair value, and are used by the Group in the management of its short-term commitments. Equity instruments are excluded from cash equivalents unless they are, in substance, cash equivalents, for example in the case of preferred shares acquired within a short period of their maturity and with a specified redemption date. However, the Group's account overdraft is included in borrowings.

(m) Non-derivative financial assets

Financial assets are recognized when the Group becomes a party to the contractual provisions of the instrument. In addition, a regular way purchase or sale (a purchase or sale of a financial asset under a contract whose terms require delivery of the asset within the time frame established generally by regulation or convention in the market concerned) is recognized on the trade date.

A financial asset is measured initially at its fair value plus, for an item not at FVTPL, transaction costs that are directly attributable to its acquisition of the financial asset. Transaction costs on the financial assets at FVTPL that are directly attributable to the acquisition are recognized in profit or loss as incurred.

i) Financial assets designated at FVTPL

Financial assets can be irrevocably designated as measured at FVTPL despite of classification standards stated below, if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise from measuring assets or liabilities or recognizing the gains or losses on them on different bases.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(m) Non-derivative financial assets (continued)

ii) Equity instruments

For the equity instruments that are not held for trading, at initial recognition, the Group may make an irrevocable election to present subsequent changes in fair value in other comprehensive income. Equity instruments that are not classified as financial assets at FVOPL.

The Group subsequently measures all equity investments at fair value. Valuation gains or losses of the equity instruments that are classified as financial assets at FVOCI previously recognized as other comprehensive income is not reclassified as profit or loss on derecognition. The Group recognizes dividends in profit or loss when the Group's right to receive payments of the dividend is established.

Valuation gains or losses due to changes in fair value of the financial assets at FVTPL are recognized as gains or losses on financial assets at FVTPL. Impairment loss (reversal) on equity instruments at FVOCI is not recognized separately.

iii) Debt instruments

Subsequent measurement of debt instruments depends on the Group's business model in which the asset is managed and the contractual cash flow characteristics of the asset. Debt instruments are classified as financial assets at amortized cost, at FVOCI, or at FVTPL. Debt instruments are reclassified only when the Group's business model changes.

a Financial assets at amortized cost

Assets that are held within a business model whose objective is to hold assets to collect contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. Impairment losses, and gains or losses on derecognition of the financial assets at amortized cost are recognized in profit or loss. Interest income on the effective interest method is included in the 'Interest income' in the consolidated statement of comprehensive income.

b Financial assets at FVOCI

Assets that are held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Other than impairment losses, interest income amortized using effective interest method and foreign exchange differences, gains or losses of the financial assets at FVOCI are recognized as other comprehensive income in equity. On derecognition, gains or losses accumulated in other comprehensive income are reclassified to profit or loss. The interest income on the effective interest method is included in the 'Interest income' in the consolidated statement of comprehensive income. Foreign exchange differences and impairment losses are included in the 'Net foreign currency transaction gain' and 'Impairment loss on financial assets' in the consolidated statement of comprehensive income, respectively.

© Financial assets at FVTPL

Debt securities other than financial assets at amortized costs or FVOCI are classified at FVTPL. Unless hedge accounting is applied, gains or losses from financial assets at FVTPL are recognized as profit or loss and are included in 'Net gain on financial assets at fair value through profit or loss' in the consolidated statement of comprehensive income.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(m) Non-derivative financial assets (continued)

iv) Embedded derivatives

Financial assets with embedded derivatives are classified regarding the entire hybrid contract, and the embedded derivatives are not separately recognized. The entire hybrid contract is considered when it is determined whether the contractual cash flows represent solely payments of principal and interest.

v) Derecognition of financial assets

The Group derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in transferred financial assets that is created or retained by the Group is recognized as a separate asset or liability.

If the Group retains substantially all the risks and rewards of ownership of the transferred financial assets, the Group continues to recognize the transferred financial assets and recognizes financial liabilities for the consideration received.

vi) Offsetting

Financial assets and financial liabilities are offset and the net amount is presented in the consolidated statement of financial position only when the Group currently has a legally enforceable right to set off the recognized amounts, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(n) Expected credit loss on financial assets

As for financial assets at amortized cost and financial assets at FVOCI, the expected credit loss is evaluated at the end of each period and recognized as loss allowances.

Since initial recognition, a loss allowance shall be measured by the three stages in the table below depending on the extent of significant increase in credit risk.

Stage	Category	Description	
Stage 1	Credit risk has not increased significantly since initial recognition	12 month expected credit losses: Expected credit loss resulting from potential default of financial instruments occurring over 12 months from the end of reporting period	
Stage 2	Credit risk has increased significantly since initial recognition	Lifetime expected credit losses: Expected credit loss resulting from all potential default of financial instruments occurring over the expected life	
Stage 3	Credit-impaired financial assets		

However, as for the financial assets whose credit is impaired at the initial recognition, only the cumulative change in the lifetime expected credit loss is recognized as the loss allowance.

The 'lifetime' refers to the expected life to the contractual maturity of the financial asset.

i) Forward looking information

The Group determines a material increase on credit risk and estimates the expected credit loss on a forward looking basis.

The measuring factors of the expected credit loss are assumed to have certain relationship with the economic cycle. Through relationship analysis between the macroeconomic variables and the credit risk measuring factors, the forward looking information is reflected in the expected credit loss estimation.

ii) Financial assets at amortized cost

The expected credit loss on the financial assets at amortized cost is recognized as the difference between the present value of the contractual cash flow and the present value of the expected cash flow. The expected cash flow is estimated separately for the individually material financial assets.

For the financial assets which are not individually material, they are included in a group of assets with a similar credit risk and expected credit loss is estimated collectively.

The expected credit losses of financial assets measured as amortized cost are presented net of loss allowance, and the allowance is derecognized together with the asset when it is determined to be unrecoverable. When the loan previously written-off is subsequently collected, it is recognized as an increase in loss allowance. At each reporting date, the Group recognizes in profit or loss the amount of the change in lifetime expected credit losses.

iii) Financial assets at FVOCI

The expected credit loss on the financial assets at FVOCI is calculated using the same method as that on the financial assets at amortized cost, however the changes in loss allowance are recognized as other comprehensive income. As for disposal and repayment, the loss allowance is reclassified from other comprehensive income to profit or loss.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(o) Derivative financial instruments

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are accounted for as described below.

i) Hedge accounting

The Group holds forward exchange contracts, interest rate swaps, currency swaps and other derivative contracts to manage interest rate risk and foreign exchange risk. The Group designated derivatives as hedging instruments to hedge the risk of changes in the fair value of assets, liabilities or firm commitments (a fair value hedge) and foreign currency risk of highly probable forecasted transactions or firm commitments (a cash flow hedge), and foreign currency risk of net investment in foreign operation (net investment hedges).

On initial designation of the hedge, the Group formally documents the relationship between the hedging instrument(s) and hedged item(s), including the risk management objectives and strategy in undertaking the hedge transaction, together with the methods that will be used to assess the effectiveness of the hedging relationship.

ii) Fair value hedges

Changes in the fair value of a derivative hedging instrument designated as a fair value hedge are recognized in profit or loss. The gain or loss from remeasuring the hedging instrument at fair value and the gain or loss on the hedged item attributable to the hedged risk are recognized in profit or loss in the same line item of the consolidated statement of comprehensive income.

The Group discontinues fair value hedge accounting if the hedging instrument expires or is sold, terminated or exercised, or if the hedge no longer meets the criteria for hedge accounting. Any adjustment arising from gain or loss on the hedged item attributable to the hedged risk is amortized to profit or loss from the date the hedge accounting is discontinued.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(o) Derivative financial instruments (continued)

iii) Cash flow hedges

When a derivative is designated as the hedging instrument in a hedge of the variability in cash flows attributable to a particular risk associated with a recognized asset or liability or a highly probable forecasted transaction that could affect profit or loss, the effective portion of changes in the fair value of the derivative is recognized in other comprehensive income and presented in the hedging reserve in equity. The amount recognized in other comprehensive income is removed and included in profit or loss in the same period as the hedged cash flows affect profit or loss under the same line item in the consolidated statements of comprehensive income as the hedged item. Any ineffective portion of changes in the fair value of the derivative is recognized immediately in profit or loss.

Once hedge accounting is discontinued, any cumulative gain or loss existing in equity at that time and is recognized over the period the forecast transaction occurs as profit or loss. However, when a forecast transaction is no longer expected to occur, the cumulative gain or loss recognized in equity is immediately recognized in the profit or loss.

If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated, exercised, or the designation is revoked, then hedge accounting is discontinued prospectively. The cumulative gain or loss previously recognized in other comprehensive income and presented in the hedging reserve in equity remains there until the forecasted transaction affects profit or loss. When the hedged item is a non-financial asset, the amount recognized in other comprehensive income is transferred to the carrying amount of the asset when the asset is recognized. If the forecasted transaction is no longer expected to occur, then the balance in other comprehensive income is recognized immediately in profit or loss. In other cases the amount recognized in other comprehensive income is transferred to profit or loss in the same period that the hedged item affects profit or loss.

iv) Hedge of net investment

Foreign currency differences arising on the retranslation of a financial liability designated as a hedge of a net investment in a foreign operation are recognized in other comprehensive income to the extent that the hedge is effective. To the extent that the hedge is ineffective, such differences are recognized in profit or loss. When the hedged part of a net investment is disposed of, the relevant amount in the accumulated other comprehensive income is transferred to profit or loss as part of the profit or loss on disposal in accordance with K-IFRS No.1021, 'The Effects of Changes in Foreign Exchange Rates'.

v) Embedded derivatives

If a hybrid contract contains a host that is not an financial asset, embedded derivatives are separated from the host contract and accounted for separately only if the economic characteristics and risks of the host contract and the embedded derivative are not closely related; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the combined instrument is not designated at FVTPL. Changes in the fair value of separable embedded derivatives are recognized immediately in profit or loss.

vi) Derivative financial instruments held for trading

Changes in the fair value of derivative financial instruments not designated as a hedging instrument are recognized immediately in profit or loss.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(o) Derivative financial instruments (continued)

vii) Day one profit or loss

If the Group uses a valuation technique that incorporates data not obtained from observable markets for the fair value at initial recognition of financial instruments, there may be a difference between the transaction price and the amount determined using that valuation technique. As for these circumstances, the difference between the fair value at the initial recognition and the transaction price is not recognized as profit or loss but deferred. The deferred difference is amortized by using straight line method over the life of the financial instruments.

(p) Property and equipment

Property and equipment are initially measured at cost and after initial recognition. The cost of property and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Property and equipment are carried at cost less accumulated depreciation and accumulated impairment losses. Certain land and buildings are measured at fair value at the date of transition to K-IFRS, which is deemed cost, in accordance with K-IFRS No.1101, 'First-time Adoption of K-IFRS'. Dividend from relevant revaluation surplus is prohibited in accordance with the resolution of the board of directors.

The Group recognizes in the carrying amount of an item of property and equipment the cost of replacing part of property and equipment when that cost is incurred if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of those parts that are replaced is derecognized. The costs of the day-to-day servicing of property and equipment are recognized in profit or loss as incurred.

Land is not depreciated. Other property and equipment are depreciated on a straight-line basis over the estimated useful lives, which most closely reflect the expected pattern of consumption of the future economic benefits embodied in the asset. Leased assets under finance leases are depreciated over the shorter of the lease term and their useful lives. The estimated useful lives for the current and comparative periods are as follows:

Descriptions	Useful lives
Buildings	40 years
Other properties	4~5 years

The gain or loss arising from the derecognition of an item of property and equipment, which is included in profit or loss, is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item.

Depreciation methods, useful lives and residual values are reassessed at each fiscal year-end and any adjustment is accounted for as a change in accounting estimate.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(q) Intangible assets

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

Amortization of intangible assets except for goodwill is calculated on a straight-line basis over the estimated useful lives of intangible assets as below from the date that they are available for use. The residual value of intangible assets is zero. However, as there are no foreseeable limits to the periods over which club memberships are expected to be available for use, this intangible asset is determined as having indefinite useful lives and not amortized.

Descriptions	Useful lives
Software and capitalized development cost	5 years
Other intangible assets	5 years or contract periods,
	whichever the shorter

Amortization periods and the amortization methods for intangible assets with finite useful lives are reviewed at the end of each reporting period. The useful lives of intangible assets that are not being amortized are reviewed at the end of each reporting period to determine whether events and circumstances continue to support indefinite useful life assessments for those assets. Changes are accounted for as changes in accounting estimates.

Expenditures on research activities, undertaken with the prospect of gaining new technical knowledge and understanding, are recognized in profit or loss as incurred. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

(r) Investment properties

Investment property is property held either to earn rental income or for capital appreciation or both. An investment property is initially recognized at cost including any directly attributable expenditure. Subsequent to initial recognition, the asset is measured at cost less accumulated depreciation and accumulated impairment losses, if any.

The depreciation method and the estimated useful lives for the current and comparative periods were as follows:

Descriptions	Depreciation method	Useful lives
Buildings	Straight-line	40 years

Subsequent costs are recognized in the carrying amount of investment property at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing are recognized in profit or loss as incurred.

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting date and adjusted, if appropriate. The change is accounted for as changes in accounting estimates.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(s) Leases - policies applicable from January 1, 2019

The Group leases various tangible assets, such as real estate and vehicles, and the terms of the lease are negotiated individually and include a variety of terms and conditions. There are no other restrictions imposed by the lease contracts, except that the lease assets cannot be provided as collaterals for borrowings.

At the commencement date of the lease, the Group recognizes a right-of-use asset and a lease liability. The payment of each lease is allocated to the repayment of the liability and finance cost. The Group recognizes in profit or loss the amount calculated to produce a constant periodic rate of interest on the lease liability balance for each period as finance costs.

Right-of-use assets are depreciated using a straight-line method from the inception of the lease over the lease term of the right-of-use assets.

Lease liabilities are measured at present value of the lease payments that are not paid at the commencement date of the lease agreement, and included in other liabilities. Lease payments included in the measurement of the lease liabilities consist of the following:

- Fixed lease payments (including in-substance fixed payments, less any lease incentives receivable)
- Variable lease payments depending on an index or a rate
- Amounts expected to be paid by the lessee under a residual value guarantee
- The exercise price under a purchase option that the lessee is reasonably certain to exercise
- Extended lease payments in an optional renewal period if the lessee is reasonably certain to that they will exercise the extension option
- Payments of penalties for early terminating a lease unless the lessee is reasonably certain not to terminate early

If the implicit interest rate in the lease can be readily determined, the lease payments shall be discounted using that rate, and if that rate cannot be readily determined, the lessee shall use the lessee's incremental borrowing rate.

The right-of-use asset is initially at cost, which comprises:

- The amount of the initial measurement of the lease liability
- Any lease payments made at or before the commencement date, less any lease incentives received
- Any initial direct costs incurred by the lessee
- An estimate of costs to be incurred by the lessee in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease

The Group includes right-of-use assets within the same line item as that within which the corresponding underlying assets would be presented if they were owned.

Any right-of-use asset that meets the definition of investment property is presented as investment property.

Lease payments associated with short-term leases or leases of low-value assets are recognized as an expense on a straight line basis over the lease term.

Additional considerations for the Group's accounting as a lessee include:

- Extension options and termination options are generally included in multiple real estate lease contracts.
- When estimating the lease term, the Group considers all relevant facts and circumstances that create an economic incentive to exercise the option to extend the lease, or not to exercise the option to terminate the lease.
- Period covered by an extension option (or period covered by termination option) is included in lease term only if the lessee is reasonably certain to exercise (or not to exercise) the option.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

- (s) Leases policies applicable from January 1, 2019 (continued)
 - The Group reassesses whether it is reasonably certain to exercise (or not to exercise) an extension option (or a termination option), upon the occurrence of either a significant event or a significant change in circumstances that:
 - (a) is within the control of the lessee
 - (b) affects whether the lessee is reasonably certain to exercise an option not previously included in its determination of the lease term, or not to exercise an option previously included in its determination of the lease term.

On December 16, 2019, the IFRS Interpretations Committee published the agenda decision on 'Lease term and useful life of leasehold improvements' that the entity should consider all economic penalties for the termination of the lease in the determination of the enforceable period. The Group is analyzing the impact of changes in accounting policies on the consolidated financial statements over the period of time available for its decision and plans to reflect the effects on the consolidated financial statements after the analysis is completed.

(t) Leases – policies applicable before January 1, 2019

The Group classifies and accounts for leases as either a finance or operating lease, depending on the terms. Leases where the Group assumes substantially all of the risks and rewards of ownership are classified as finance leases. All other leases are classified as operating leases.

i) Finance leases

At the commencement of the lease term, the Group recognizes as finance assets and finance liabilities in its consolidated statements of financial position, the lower amount of the fair value of the leased property and the present value of the minimum lease payments, each determined at the inception of the lease. Any initial direct costs are added to the amount recognized as an asset.

Minimum lease payments are apportioned between the finance charge and the reduction of the outstanding liability. The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability. Contingent rents are charged as expenses in the periods in which they are incurred.

The depreciable amount of a leased asset is allocated to each accounting period during the period of expected use on a systematic basis consistent with the depreciation policy the lessee adopts for depreciable assets that are owned. If there is no reasonable certainty that the lessee will obtain ownership by the end of the lease term, the asset is fully depreciated over the shorter of the lease term and its useful life. The Group reviews to determine whether the leased asset may be impaired.

ii) Operating leases

Payments made under operating leases are recognized in profit or loss on a straight-line basis over the period of the lease.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(u) Non-current assets held for sale

Assets, or disposal groups comprising assets and liabilities, that are expected to be recovered primarily through sale rather than through continuing use, are classified as held for sale. In order to be classified as held for sale, the asset (or disposal group) must be available for immediate sale in its present condition and its sale must be highly probable. The assets or disposal group that are classified as assets held for sale are measured at the lower of their carrying amount and fair value less cost to sell.

The Group recognizes an impairment loss for any initial or subsequent write-down of an asset (or disposal group) to fair value less costs to sell, and a gain for any subsequent increase in fair value less costs to sell, up to the cumulative impairment loss previously recognized.

An asset that is classified as held for sale or part of a disposal group classified as held for sale is not depreciated (or amortized).

(v) Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets, other than assets arising from employee benefits, deferred tax assets and non-current assets held for sale, are reviewed at the end of the reporting period to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, are tested for impairment annually by comparing their recoverable amount to their carrying amount.

The Group estimates the recoverable amount of an individual asset, if it is impossible to measure the individual recoverable amount of an asset, then the Group estimates the recoverable amount of cash-generating unit ("CGU"). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or group of assets. The recoverable amount of an asset or a CGU is the greater of its value in use and its fair value less costs to sell. The value in use is estimated by applying a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or the CGU for which estimated future cash flows have not been adjusted, to the estimated future cash flows expected to be generated by the asset or the CGU.

An impairment loss is recognized if the carrying amount of an asset or a CGU exceeds its recoverable amount. Impairment losses are recognized in profit or loss.

Goodwill acquired in a business combination is allocated to each CGU that is expected to benefit from the synergies arising from the goodwill acquired. Any impairment identified at the CGU level will first reduce the carrying value of goodwill and then be used to reduce the carrying amount of the other assets in the CGU on a pro rata basis. Except for impairment losses in respect of goodwill which are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(w) Non-derivative financial liabilities

The Group recognizes financial liabilities in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the financial liability in accordance with the substance of the contractual arrangement and the definitions of financial liabilities.

Transaction costs on the financial liabilities at FVTPL are recognized in profit or loss as incurred.

i) Financial liabilities designated at FVTPL

Financial liabilities can be irrevocably designated as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases, or a group of financial instruments is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy. The amount of change in the fair value of the financial liabilities designated at FVTPL that is attributable to changes in the credit risk of that liabilities shall be presented in other comprehensive income.

ii) Financial liabilities at FVTPL

Since initial recognition, financial liabilities at FVTPL is measured at fair value, and changes in the fair value are recognized as profit or loss.

iii) Other financial liabilities

Non-derivative financial liabilities other than financial liabilities at fair value through profit or loss are classified as other financial liabilities. At the date of initial recognition, other financial liabilities are measured at fair value minus transaction costs that are directly attributable to the acquisition. Subsequent to initial recognition, other financial liabilities are measured at amortized cost using the effective interest method.

The Group derecognizes a financial liability from the consolidated statement of financial position when it is extinguished (i.e. when the obligation specified in the contract is discharged, cancelled or expires).

(x) Equity capital

i) Capital stock

Capital stock is classified as equity. Incremental costs directly attributable to the transaction of stock are deducted from equity, net of any tax effects.

ii) Hybrid bonds

The Group classifies an issued financial instrument, or its component parts, as a financial liability or an equity instrument depending on the substance of the contractual arrangement of such financial instrument. Hybrid bonds where the Group has an unconditional right to avoid delivering cash or another financial asset to settle a contractual obligation are classified as an equity instrument and presented in equity.

iii) Non-controlling interests

Non-controlling interests, which represent the equity in a subsidiary not attributable, directly or indirectly, to a parent's ownership interests, consist of the amount of those non-controlling interests at the date of the original combination calculated in accordance with K-IFRS No.1103, 'Business Combinations' and the non-controlling interests share of changes in equity since the date of the combination.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(y) Employee benefits

i) Short-term employee benefits

Short-term employee benefits are employee benefits that are due to be settled within 12 months after the end of the period in which the employees render the related service. When an employee has rendered service to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

ii) Other long-term employee benefits

The Group's net obligation in respect of other long-term employee benefits that are not expected to be settled wholly before 12 months after the end of the annual reporting period in which the employees render the related service, is the amount of future benefit that employees have earned in return for their service in the current and prior periods. That benefit is discounted to determine its present value. Remeasurements are recognized in profit or loss in the period in which they arise.

iii) Retirement benefits: defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Group's net obligation in respect of defined benefit plans is calculated by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of plan assets is deducted. The calculation is performed annually by an independent actuary using the projected unit credit method.

The discount rate is the yield at the reporting date on high-quality corporate bonds that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid. The Group recognizes service cost and net interest on the net defined benefit liability (asset) in profit or loss and remeasurements of the net defined benefit liability (asset) in other comprehensive income.

iv) Retirement benefits: defined contribution plans

The Group recognizes the contribution expense as an account of severance payments in profit or loss in the period according to the defined contribution plans.

v) Termination benefits

Termination benefits are expensed at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognizes costs for a restructuring. If benefits are not expected to be wholly settled within 12 months of the reporting date, then they are discounted.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(z) Share-based payment transactions

The grant date fair value of share-based payment awards granted to employees is recognized as an employee expense, with a corresponding increase in equity, over the period that the employees unconditionally become entitled to the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and non-market vesting conditions are expected to be met, such that the amount ultimately recognized as an expense is based on the number of awards that do meet the related service and non-market performance conditions at the vesting date. For share-based payment awards with non-vesting conditions, the grant date fair value of the share-based payment is measured to reflect such conditions and there is no true-up for differences between expected and actual outcomes.

The fair value of the amount payable to employees in respect of share appreciation rights, which are settled in cash, is recognized as an expense with a corresponding increase in liabilities, over the period that the employees unconditionally become entitled to payment. The liability is remeasured at each reporting date and at settlement date. Any changes in the fair value of the liability are recognized as personnel expense in profit or loss.

The Group has granted share-based payment based on Shinhan Financial Group's share to the employees. In accordance with a repayment arrangement with Shinhan Financial Group, the Group is required to pay Shinhan Financial Group for the provision of the share-based payments. The Group recognizes the costs as expenses and accrued expenses in liabilities for the service period. When vesting conditions are not satisfied because of death, retirement or dismissal of employees during the specified service period, no amount is recognized for goods or services received on a cumulative basis. Share-based payment arrangements in which the Group has no obligation to settle the share-based payment transaction are accounted for as equity-settled share-based payment transactions, regardless of the repayment arrangement with Shinhan Financial Group.

(aa) Provisions

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

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

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

Provisions shall be used only for expenditures for which the provisions are originally recognized.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(ab) Financial guarantee contract

A financial guarantee contract is a contract that requires the Group to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument. Financial guarantee contracts are recognized initially at their fair value, and the initial fair value is amortized over the life of the financial guarantee contract. The financial guarantee liability is subsequently measured at the higher of the amount of the best estimate of the expenditure required to settle the present obligation at the end of reporting period; and the amount initially recognized less, cumulative amortization recognized on a straight-line basis over the guarantee period. Financial guarantee liabilities are included within other liabilities.

From January 1, 2018, after initial recognition, financial guarantee contracts are measured at the higher of:

- Loss allowance in accordance with K-IFRS No.1109, 'Financial Instruments'
- The amount initially recognized less, when appropriate, the cumulative amount of income recognized in accordance with the principles of K-IFRS No.1115, 'Revenue from Contracts with Customers'

(ac) Recognition of revenues and expenses

The Group's revenues are recognized using five-step revenue recognition model as follows: ① 'Identifying the contract' \rightarrow ② 'Identifying performance obligations' \rightarrow ③ 'Determining the transaction price' \rightarrow ④ 'Allocating the transaction price to performance obligations' \rightarrow ⑤ 'Recognizing the revenue by satisfying performance obligations'.

i) Interest income and expense

Interest income and expense are in the scope of K-IFRS No.1109 and recognized in profit or loss using the effective interest method. The effective interest rate is the rate that exactly discounts the estimated future cash payments and receipts through the expected life of the financial asset or liability or, where appropriate, a shorter period to the net carrying amount of the financial asset or liability. When calculating the effective interest rate, the Group estimates cash flows considering all contractual terms of the financial instrument, but does not consider future credit losses. The calculation includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate, and all other premiums or discounts. When it is not possible to estimate reliably the cash flows or the expected life of a financial instrument, the Group uses the contractual cash flows over the full contractual term of the financial instrument.

Once a financial asset or a group of similar financial assets has been written down as a result of an impairment loss, interest income is thereafter recognized using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

ii) Fees and commission

The recognition of revenue for financial service fees depends on the purposes for which the fees are assessed and the basis of accounting for any associated financial instrument.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

- (ac) Recognition of revenues and expenses (continued)
 - (a) Fees that are an integral part of the effective interest rate of a financial instrument

Such fees are generally treated as an adjustment to the effective interest rate. Such fees may include compensation for activities such as evaluating the borrower's financial condition, evaluating and recording guarantees, collateral and other security arrangements, preparing and processing documents, closing the transaction and the origination fees received on issuing financial liabilities. However, when the financial instrument is measured at fair value with the change in fair value recognized in profit or loss, the fees are recognized as revenue when the instrument is initially recognized.

(b) Fees earned as services are provided

Fees and commission income, including investment management fees, sales commission, and account servicing fees, are recognized as revenue when the related service as a performance obligation is provided.

© Fees that are earned on the execution of a significant act

The fees that are earned on the execution of a significant act including commission on the allotment of shares or other securities to a client, placement fee for arranging a loan between a borrower and an investor and sales commission, are recognized as revenue when the significant act as a performance obligation has been completed.

iii) Dividends

Dividends income is recognized when the shareholder's right to receive payment is established. Usually this is the ex-dividend date for equity securities.

(ad) Income tax

Income tax expense comprises current and deferred tax. Current tax and deferred tax are recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income.

Shinhan Financial Group, the parent company, files its national income tax return with the Korean tax authorities under the consolidated corporate tax system, which allows it to make national income tax payments based on the consolidated profits or losses of the Shinhan Financial Group and its wholly owned domestic subsidiaries including the Bank. Deferred taxes are measured based on the future tax benefits expected to be realized in consideration of the expected profits or losses of eligible companies in accordance with the consolidated corporate tax system. Consolidated corporate tax amounts, once determined, are allocated to each of the subsidiaries and are used as a basis for the income taxes to be recorded in their stand-alone financial statements.

The Group recognizes deferred tax liabilities for all taxable temporary differences associated with investments in subsidiaries, associates, and interests in joint ventures, except to the extent that the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The Group recognizes deferred tax assets for all deductible temporary differences arising from investments in subsidiaries and associates, to the extent that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

2. Significant accounting policies (continued)

(ad) Income tax (continued)

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and deferred tax assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period to recover or settle the carrying amount of its assets and liabilities.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and reduced the carrying amount to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized.

Deferred tax assets and liabilities are offset only if there is a legally enforceable right to offset the related current tax liabilities and assets, and they relate to income taxes levied by the same tax authority and they intend to settle current tax liabilities and assets on a net basis.

If any additional income tax expense exists by payment of dividends, the Group recognizes it when the liability relating to the payment is recognized.

Because of the tax positions taken by the Group, tax uncertainties arise from the complexity of transactions and differences in tax law interpretation. Also, uncertainty arises from a tax refund suit, tax investigation, or a refund suit against the tax authorities' assessed tax amount. For the tax amount paid to the tax authorities, in accordance with K-IFRS No.2123, it will be recognized as the corporate tax assets if a refund in the future is probable. In addition, the amount expected to be paid as a result of the tax investigation is recognized as the tax liability.

(ae) Accounting for trust accounts

The Group accounts for trust accounts separately from its bank accounts under *the Financial Investment Services* and Capital Markets Act and thus the trust accounts are not included in the accompanying consolidated financial statements. Borrowings from trust accounts are included in other liabilities. Trust fees and commissions in relation to the service provided to trust accounts by the Group are recognized as fees and commission income.

(af) Earnings per share

The Group presents basic and diluted earnings per share (EPS) data for its ordinary shares. Basic EPS is calculated by dividing the profit or loss attributable to the ordinary shareholder of the Bank by the weighted average number of common shares outstanding during the period, adjusted for own shares held. Diluted EPS is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of ordinary shares outstanding, adjusted for own shares held, for the effects of all dilutive potential ordinary shares, which comprise share options granted to employees.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

3. Financial risk management

3-1. Credit risk

Credit risk is the risk of financial loss of the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligation, and arises principally from due from banks, the lending process related to loans, investment activities in debt securities and off balance sheet items including loan commitments, etc. Credit risk management is critical to the Group's business activities; thus, the Group carefully manages its credit risk exposure.

(a) Credit risk management

Major policies of the credit risk management are determined by the Risk Policy Committee, which is the Group's executive decision-making body for credit risk management. The Risk Policy Committee is led by the Group's Deputy President and Head of Risk Management Group. The Risk Policy Committee also consists of chief officers from eight different business units. The Credit Review Committee performs credit review evaluations and operates separately from the Risk Policy Committee.

Each business unit is required to implement the Group's risk management policies and procedures. Risk Management Department reviews compliance of business units with agreed exposure limits established by the Risk Policy Committee, including those for selected industries, country risk and product types.

The Group established the authorization structure for the approval and renewal of credit facilities. Authorization limits are allocated to the business unit credit officer. Larger facilities require approval by the Credit Committee. The Group assesses all credit exposures in excess of designated limits, prior to facilities being committed to customers by the business unit concerned. Renewals and review of facilities are subject to the same review process.

The Group is responsible for limiting concentrations of exposures to counterparties, geographies and industries, and by issuers, credit rating band, market liquidity and country.

The Group develops and maintains the risk grading system in order to categorize exposures according to the degree of risk of financial loss faced and to focus management on the attendant risks. The risk grading system is used in determining credit approvals, credit renewals, credit pricing, credit limits, or where impairment provisions may be required against specific credit exposures for existing loans.

Each business unit is responsible for the quality and performance of its credit portfolio and for monitoring and controlling all credit risks in its portfolio, including those subject to central approval. In addition to periodic loan reviews by credit officers, the Group also utilizes an automated monitoring tool which conducts identifications for companies with high probability of default. Regular reports on the credit quality of portfolios of each business unit are provided to the Credit Administration Department who may require appropriate corrective action to be taken.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

3. Financial risk management (continued)

3-1. Credit risk (continued)

(b) Risk management and risk mitigation policy

In order to control the credit risk of the Group at an appropriate level, the following risk management system is established and operated.

- Credit risk limits are set and managed by business segments, customer, product, industry, etc. based on credit VaR (Value at Risk) and maximum exposure amount.
- The Risk Management Department establishes and manages limits for credit VaR, and maximum exposure limits. The Credit Planning Department and the Credit Assessment Department conduct maximum exposure limits.
- The Risk Management Department and Risk Engineering Department establishes a credit risk limit operation plan for the entire bank at least once a year, and commits it to the risk policy committee.
- Each business unit monitors and adheres to credit risk limits assigned.
- Identify and manage by individual and corporate customers, industry and nationality for identified credit risk.
- Set limits on acceptable risks for individual borrowers or borrowers, and by geographical sectors.
- The risk is reviewed on an annual basis or within a period when it is deemed necessary, and the limits of risks by product, industry and country are approved by the Board on a quarterly basis.
- The maximum amount of exposure by the borrower, including the public institution, is managed separately by the lower level limit for the accounts in the consolidated financial statements and the other accounts, and the limit of the risk is also determined for daily transactions related to commodity transactions such as foreign currency forward transactions.
- Actual maximum exposure limit is managed on a daily basis.
- Maximum credit risk exposure is managed in the process of analyzing the interest and principal repayment ability of the borrower, and if necessary, changes the credit limit in the process.

Other risk management measures are as follows.

i) Collateral

The Group has adopted policies and procedures to mitigate credit risk. In connection with credit risk, collateral is generally required, and the Group has adopted a policy for pledging certain types of assets. The main types of collateral are as follows:

- Mortgage
- Real estate, inventories, accounts receivable, etc.
- Financial instruments such as debt securities and equity securities

Long-term loans are generally collateralized. On the other hand, revolving personal loans are generally unsecured. In addition, in order to minimize losses due to credit risk, the Group establishes additional collateral for the counterparty in the event of an indication of impairment of the asset.

Collateral for financial assets other than loans is subject to the nature of the products. Except for special cases such as Asset Backed Securities (ABS), unsecured securities are common in the case of debt securities.

ii) Derivative financial instruments

The Group maintains a credit limit on the amount and duration of derivative financial instruments that are in between the disposal agreements after purchase.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

3. Financial risk management (continued)

3-1. Credit risk (continued)

- (b) Risk management and risk mitigation policy (continued)
 - iii) Collective offsetting contracts

The Group manages its maximum exposure to credit losses by engaging in collective offsetting contracts with counterparties in executing significant number of transactions.

Collective offsetting contracts generally do not result from offsetting assets and liabilities in the consolidated financial statements, as transactions are usually set at a gross amount basis. However, when all amounts to a particular counterparty are set on a net basis, the credit risk associated with a favorable contract is reduced by collective offsetting contracts if losses are incurred.

The Group's overall maximum exposure to credit risk that is part of a collective offsetting contract can vary substantially within a short period of time because it is affected by each transaction.

iv) Credit related contracts

Guarantees and credit enhancements have credit risks similar to credit. Credit (which guarantees credit on behalf of the customer by issuing a note to a third party for the amount requested under specific terms and conditions) is secured by the underlying commodities associated with them, it involves less risk. The credit enhancement arrangements represent the unused portion of the credit limit in the form of a credit, guarantee or letter of credit. In relation to the credit risk of a credit enhancement arrangement, the Group is potentially exposed to the same amount as the total unused arrangements. Long-term contracts generally have a greater degree of credit risk than short-term, and the Group monitors the maturity of credit arrangements.

- (c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model)
 - i) Determining significant increases in credit risk since initial recognition

At each reporting date, the Group assesses whether the credit risk on a financial instrument has increased significantly since initial recognition. When making the assessment, the Group uses the change in the risk of default occurring over the expected life of the financial instrument instead of the change in the amount of expected credit losses. To make that assessment, the Group compares the risk of default occurring on the financial instrument as at the reporting date with the risk of default occurring on the financial instrument as at the date of initial recognition and consider reasonable and supportable information, that is available without undue cost or effort, that is indicative of significant increases in credit risk since initial recognition. The supporting information also includes historical default data held by the Group and the analysis by internal credit risk rating specialists.

(a) Measuring the risk of default

The Group assigns an internal credit risk rating to each individual exposure based on observable data and historical experiences that have been found to have a reasonable correlation with the risk of default. The internal credit risk rating is determined by considering both qualitative and quantitative factors that indicate the risk of default, which may vary depending on the nature of the exposure and the type of borrower.

The internal credit risk rating based on the borrower's information related to each individual exposures on initial recognition, may change depending on the results of continuing monitoring and reviews.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

3. Financial risk management (continued)

3-1. Credit risk (continued)

- (c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model) (continued)
 - i) Determining significant increases in credit risk since initial recognition (continued)
 - (b) Measuring term structure of probability of default

The Group accumulates information after analyzing the information regarding exposure to credit risk and default information by the type of product and borrower and results of internal credit risk assessment. For some portfolios, the Group uses information obtained from external credit rating agencies when performing these analyses.

The Group applies statistical techniques to estimate the probability of default for the remaining life of the exposure from the accumulated data and to estimate changes in the estimated probability of default over time.

© Significant increases in credit risk

The Group uses the indicators defined as per portfolio to determine the significant increase in credit risk and such indicators generally consist of changes in the risk of default estimated from changes in the internal credit risk rating, qualitative factors, days of delinquency, and others. The factors evaluated to determine whether credit risk of financial instruments has significantly increased after the initial recognitions is summarized as follows:

Corporate exposures

Significant change in credit ratings
Continued past due for more than 30 days
Loan classification of precautionary and below
Borrower with early warning signals
Negative net assets
Adverse audit opinion or disclaimer of opinion

Interest coverage ratios of below 1 for consecutive three years

Negative cash flows from operating activities for consecutive two years

Retail exposures

Significant change in credit ratings
Continued past due for more than 30 days
Loan classification of precautionary and below
Borrower with early warning signals
Specific pool segment
Collective loans for housing for which the constructors
are insolvent

The Group considers the credit risk of financial instrument has been significantly increased since initial recognition if a specific exposure is past due for more than 30 days. The Group counts the number of days past due from the earliest date on which the Group has not received the contractual payments in full from the borrower and does not consider the grace period granted to the borrower.

The Group regularly reviews the criteria for determining if there have been significant increases in credit risk from the following perspective.

- A significant increase in credit risk shall be identified prior to the occurrence of default.
- The criteria established to judge the significant increase in credit risk shall be more predictive than the criteria for days of delinquency.
- As a result of applying the judgment criteria, financial instruments shall not move too frequently between the 12-months expected credit losses measurement and the lifetime expected credit losses measurement.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

3. Financial risk management (continued)

3-1. Credit risk (continued)

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model) (continued)

ii) Modified financial assets

If the contractual cash flows on a financial asset have been renegotiated or modified and the financial asset was not derecognized, the Group assesses whether there has been a significant increase in the credit risk of the financial instrument by comparing the risk of default occurring at initial recognition based on the original, unmodified contractual terms and the risk of default occurring at the reporting date based on the modified contractual terms.

The Group may adjust the contractual cash flows of loans to customers who are in financial difficulties in order to manage the risk of default and enhance the collectability (hereinafter referred to as 'debt restructuring'). These adjustments generally involve extension of maturity, changes in interest payment schedule, and changes in other contractual terms.

Debt restructuring is a qualitative indicator of a significant increase in credit risk and the Group recognizes lifetime expected credit losses for the exposure expected to be the subject of such adjustments. If a borrower faithfully makes payments of contractual cash flows that were modified in accordance with the debt restructuring or if the borrower's internal credit rating has recovered to the level prior to the recognition of the lifetime expected credit losses, the Group recognizes the 12-months expected credit losses for that exposure again.

iii) Risk of default

The Group considers a financial asset to be in default if it meets one or more of the following conditions:

- if a borrower is overdue 90 days or more from the contractual payment date,
- if the Group judges that it is not possible to recover principal and interest without enforcing the collateral on a financial asset

The Group uses the following indicators when determining whether a borrower is in default:

- qualitative factors (e.g. breach of contract terms),
- quantitative factors (e.g. if the same borrower does not perform more than one payment obligations to the Group, the number of days past due per payment obligation. However, in the case of a specific portfolio, the Group uses the number of days past due for each financial instrument.)
- internal data and external data

The definition of default applied by the Group generally conforms to the definition of default defined for regulatory capital management purposes; however, depending on the situations, the information used to determine whether a default has incurred and the extent thereof may vary.

iv) Reflection of forward-looking information

The Group reflects forward-looking information presented by internal experts based on a variety of sources when measuring expected credit losses. For the purpose of estimating these forward-looking information, the Group utilizes the economic outlook published by domestic and overseas research institutes or government and public agencies.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

3. Financial risk management (continued)

3-1. Credit risk (continued)

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model) (continued)

The Group reflects future macroeconomic conditions anticipated from a neutral standpoint that is free from bias in measuring expected credit losses. Expected credit losses in this respect reflect conditions that are most likely to occur and are based on the same assumptions that the Group used in its business plan and management strategy.

The Group identified the key macroeconomic variables relevant to forecast credit risk and credit losses for each portfolio as follows by analyzing past experience data and drew correlations across credit risk for each variable.

Key macroeconomic variables	Correlation with credit risk
Economic growth	Negative
Consumer price change rates	Positive
Benchmark rate	Positive
3-year interest rate for Korea treasury bond	Positive
3-year interest rate for corporate bond	Positive
KOSPI	Negative

The predicted correlations between the macroeconomic variables and the risk of default, used by the Group, were derived based on data from the past nine years.

v) Measurement of expected credit losses

Key variables used in measuring expected credit losses are as follows:

- Probability of default (PD)
- Loss given default (LGD)
- Exposure at default (EAD)

These variables have been estimated from historical experience data by using the statistical techniques developed internally by the Group and have been adjusted to reflect forward-looking information.

Estimates of PD over a specified period are estimated by reflecting characteristics of counterparties and their exposure, based on a statistical model at a specific point of time. The Group uses its own information to develop a statistical credit assessment model used for the estimation, and additional information observed in the market is considered for some portfolios such as a group of large corporates. When a counterparty or exposure is concentrated in specific grades, the method of measuring PD for that grades would be adjusted, and the PD by grade is estimated by considering contract expiration of the exposure.

LGD refers to the expected loss if a borrower defaults. The Group calculates LGD based on the experience recovery rate measured from past default exposures. The model for measuring LGD is developed to reflect type of collateral, seniority of collateral, type of borrower, and cost of recovery. In particular, LGD for retail loan products uses loan to value (LTV) as a key variable. The recovery rate reflected in the LGD calculation is based on the present value of recovery amount, discounted at the effective interest rate.

EAD refers to the expected exposure at the time of default. The Group derives EAD reflecting a rate at which the current exposure is expected to be used additionally up to the point of default within the contractual limit. EAD of financial assets is equal to the total carrying amount of the asset, and EAD of loan commitments or financial guarantee contracts is calculated as the sum of the amount expected to be used in the future.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

3. Financial risk management (continued)

3-1. Credit risk (continued)

(c) Techniques, assumptions and input variables used to measure impairment (Expected credit loss model) (continued)

When measuring expected credit losses on financial assets, the Group reflects a period of expected credit loss measurement based on a contractual maturity. The Group takes into consideration of the extension rights held by a borrower when deciding the contractual maturity.

Risk factors such as PD, LGD and EAD are collectively estimated according to the following criteria:

- Type of products
- Internal credit risk rating
- Type of collateral
- Loan to value (LTV)
- Industry that the borrower belongs to
- Location of the borrower or collateral
- Days of delinquency

The criteria for classification of groups are periodically reviewed to maintain homogeneity of the group and adjusted if necessary. The Group uses external benchmark information to supplement internal information for a particular portfolio that did not have sufficient internal data accumulated from the past experience.

vi) Write-off of financial assets

The Group writes off a portion of or entire loan or debt security for which the Group does not expect to receive principal and interest. In general, the Group conducts write-off when it is deemed that the borrower has no sufficient resources or income to repay the principal and interest. Such determination on write-off is carried out in accordance with the internal rules of the Group and is carried out with the approval of an external institution, if necessary. Apart from write-off, the Group may continue to exercise its right of collection under its own recovery policy even after the write-off of financial assets.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(d) Maximum exposure to credit risk

The Group's maximum exposure to credit risk without taking account of any collateral held or other credit enhancements as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Due from banks (*1)(*2):			
Banks	W	4,892,412	5,155,564
Governments		16,629,285	5,425,800
		21,521,697	10,581,364
Loans at amortized cost (*1)(*2):			
Banks		4,029,431	8,725,756
Retail:			
Mortgage lending		52,175,895	49,114,592
Others		86,156,152	76,271,127
	_	138,332,047	125,385,719
Governments Corporate		2,425,213	690,658
Large enterprises		32,198,948	32,548,577
Small and medium-sized enterprises		83,960,258	78,817,756
Special finance		7,075,974	4,965,619
Others		473	941
Others	_	123,235,653	116,332,893
Credit cards	-	149,920	98,780
Credit curds	-	268,172,264	251,233,806
Loans at FVTPL:	-	200,172,204	231,233,000
Banks		_	20,004
Corporate			20,001
Large enterprises		714,946	319,918
Small and medium-sized enterprises		154,045	305,315
Sman and modium sized enterprises	_	868,991	625,233
	_	868,991	645,237
Securities at FVTPL:	_		
Debt securities		18,491,116	15,334,231
Gold/silver deposits		111,715	154,881
Total and the position	_	18,602,831	15,489,112
Securities at FVOCI (*1)	_	40,060,734	31,435,546
Securities at amortized cost (*1)		20,251,888	16,824,400
Derivative assets		2,101,993	1,484,458
Other financial assets (*1)(*3)		13,518,528	14,200,801
Off balance sheet items:		, ,	• •
Financial guarantee contracts		4,676,823	4,391,207
Loan commitments and other liabilities for			•
credit		97,161,128	91,002,891
	_	101,837,951	95,394,098
	W	486,936,877	437,288,822
(*1) The maximum exposure amounts for due from	hanl	ve and loans and other fine	ancial accets are measured

^(*1) The maximum exposure amounts for due from banks and loans and other financial assets are measured as the amount net of allowances.

^(*2) Due from banks and loans were classified as similar credit risk group to be with consistent calculating capital adequacy ratio under New Basel Capital Accord (Basel III).

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

- (d) Maximum exposure to credit risk (continued)
 - (*3) Other financial assets comprise accounts receivable, accrued income, guarantee deposits, domestic exchange settlements receivables, suspense receivables, etc.
- (e) Credit risk exposure by credit risk grade
 - i) The maximum exposures of financial instruments to credit risk by credit risk grade as of December 31, 2019 and 2018 were as follows:

				Dec	ember 31, 20	019			
	12-month	expected loss	Life ti	me expected l	oss				Mitigation of redit risk due
	Grade 1	Grade 2	Grade 1	Grade 2	Impaired	Total	Allowances	Net	to collateral
Due from banks:									
Banks	₩ 4,895,93	- 33	3,905	-	-	4,899,838	(7,426)	4,892,412	6,599
Governments	16,633,13	- 39	563	-	-	16,633,702	(4,417)	16,629,285	-
	21,529,07	72 -	4,468			21,533,540	(11,843)	21,521,697	6,599
Loans at amortized	'								
cost:									
Banks	2,778,93	37 1,179,294	73,770	1,804	-	4,033,805	(4,374)	, ,	44,332
Retail	124,571,53	39 4,882,715	5,519,094	3,335,828	382,889	138,692,065	(360,018)	138,332,047	79,289,750
Governments	2,314,52	23 111,987	-	-	-	2,426,510	(1,297)	2,425,213	-
Corporate	73,865,6	17 27,335,455	9,650,012	12,687,832	854,700	124,393,616	(1,157,963)	123,235,653	70,113,899
Credit cards	2	23 148,484	6	3,418	1,505	153,436	(3,516)	149,920	967
	203,530,63	33,657,935	15,242,882	16,028,882	1,239,094	269,699,432	(1,527,168)	268,172,264	149,448,948
Securities at	'								
FVOCI (*1)	31,174,14	44 8,647,496	-	239,094	-	40,060,734	-	40,060,734	-
Securities at									
amortized cost	18,962,24	1,271,681	23,273			20,257,199	(5,311)	20,251,888	
	W 275,196,10	00 43,577,112	15,270,623	16,267,976	1,239,094	351,550,905	(1,544,322)	350,006,583	149,455,547

^(*1) Provision for credit loss allowance recognized in other comprehensive income on securities at FVOCI is \text{\text{W21,126}} million.

	_		December 31, 2018										
	_	12-month ex	pected loss	Life ti	me expected l	oss				Mitigation of credit risk due			
	_	Grade 1	Grade 2	Grade 1	Grade 2	Impaired	Total	Allowances	Net	to collateral			
Due from banks:													
Banks	W	5,162,123	-	3,816	-	-	5,165,939	(10,375)	5,155,564	-			
Governments		5,430,210	-	-	-	-	5,430,210	(4,410)	5,425,800	-			
	_	10,592,333	_	3,816	_	_	10,596,149	(14,785)	10,581,364				
Loans at amortized	_			,									
cost:													
Banks		7,715,882	921,256	91,050	11,494	-	8,739,682	(13,926)	8,725,756	54,903			
Retail		113,520,487	4,138,405	4,853,910	2,897,946	340,159	125,750,907	(365,188)	125,385,719	75,022,341			
Governments		688,758	2,399	-	-	-	691,157	(499)	690,658	-			
Corporate		73,508,663	22,812,566	9,529,058	11,000,465	773,440	117,624,192	(1,291,299)	116,332,893	66,769,705			
Credit cards		19	100,172	2	2,318	1,069	103,580	(4,800)	98,780	548			
		195,433,809	27,974,798	14,474,020	13,912,223	1,114,668	252,909,518	(1,675,712)	251,233,806	141,847,497			
Securities at													
FVOCI (*1)		24,490,856	6,838,860	-	105,830	-	31,435,546	-	31,435,546	-			
Securities at													
amortized cost	_	16,006,518	800,172	22,474	<u>-</u>		16,829,164	(4,764)	16,824,400				
	W	246,523,516	35,613,830	14,500,310	14,018,053	1,114,668	311,770,377	(1,695,261)	310,075,116	141,847,497			

^(*1) Provision for credit loss allowance recognized in other comprehensive income on securities at FVOCI is \(\mathbb{W}\)20,564 million.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

- (e) Credit risk exposure by credit risk grade (continued)
 - ii) Credit risk exposures per credit grade of off balance sheet items as of December 31, 2019 and 2018 were as follows:

			December 3	1, 2019	
	_	12-month expected credit loss	Life time expected		T-4-1
Einensial seemantas	-	credit ioss	credit loss	Impaired	Total
Financial guarantee: Grade 1	₩	2 790 072	246 014		2.026.797
	-VV -	2,789,973	246,814	-	3,036,787
Grade 2		1,494,534	144,691	811	1,639,225
Impaired	_	4,284,507	391,505	811	4,676,823
Loan commitment and	_	4,284,307	391,303	811	4,070,823
other credit line					
Grade 1		73,264,970	4,463,089	-	77,728,059
Grade 2		17,818,559	1,613,799	-	19,432,358
Impaired		-	-	711	711
	_	91,083,529	6,076,888	711	97,161,128
	W	95,368,036	6,468,393	1,522	101,837,951
			December 3	1, 2018	
	_	12-month	Life time	•	
		expected	expected		
		credit loss	credit loss	Impaired	Total
Financial guarantee:					
Grade 1	W	2,117,330	144,396	-	2,261,726
Grade 2		1,975,530	152,162	-	2,127,692
Impaired		-	-	1,789	1,789
	_	4,092,860	296,558	1,789	4,391,207
Loan commitment and other credit line					
Grade 1		69,820,060	2,995,450	_	72,815,510
Grade 2		16,931,240	1,256,141	_	18,187,381
Impaired			-	-	-
1	_	86,751,300	4,251,591		91,002,891
	W	90,844,160	4,548,149	1,789	95,394,098

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

- (e) Credit risk exposure by credit risk grade (continued)
 - iii) Credit risk exposures per collateral of financial instruments as of December 31, 2019 and 2018 were as follows:

			December 3	1, 2019	
	•	12-month	Life time		
		expected	expected		
		credit loss	credit loss	Impaired	Total
Guarantees	W	11,523,372	3,694,329	52,199	15,269,900
Deposits and savings		729,250	237,633	1,029	967,912
Property and equipment		1,004,903	307,109	12,511	1,324,523
Real estate		122,283,975	14,287,456	336,493	136,907,924
	W	135,541,500	18,526,527	402,232	154,470,259
			December 3	1, 2018	
		12-month	Life time		
		expected	expected		
		credit loss	credit loss	Impaired	Total
Guarantees	₩	12,805,907	3,827,687	50,198	16,683,792
Deposits and savings		761,631	222,692	677	985,000
Property and equipment		1,051,573	244,571	18,766	1,314,910
Real estate		113,055,399	13,530,936	256,917	126,843,252
	W	127,674,510	17,825,886	326,558	145,826,954

iv) Credit risk exposures per LTV of mortgage loans as of December 31, 2019 and 2018 were as follows:

				December 3	1, 2019		
	•		Above 40% ~	Above 60% ∼	Above 80% ∼		
		40% or less	60%	80%	100%	Other	Total
Loans at							
amortized cost	W	17,977,438	15,304,948	14,449,806	3,370,661	1,093,427	52,196,280
Less: allowance		(1,193)	(2,247)	(6,481)	(6,615)	(3,850)	(20,386)
	W	17,976,245	15,302,701	14,443,325	3,364,046	1,089,577	52,175,894
	-						
				December 3	31, 2018		
	•		Above 40% ~	Above 60% ~	Above 80% ~		
		40% or less	60%	80%	100%	Other	Total
Loans at							
amortized cost	₩	16,867,813	15,050,255	13,489,872	3,126,966	601,275	49,136,181
amortized cost Less: allowance	₩	16,867,813 (1,321)	15,050,255 (2,208)	13,489,872 (6,340)	3,126,966 (5,715)	601,275 (6,005)	49,136,181 (21,589)

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

- (e) Credit risk exposure by credit risk grade (continued)
 - v) Credit risk exposure per grades of financial instruments as of December 31, 2019 and 2018 were as follow:

Type of borrowers	Grade 1	Grade 2
Banks and	OECD sovereign credit rating of 6 or above	OECD sovereign credit rating of below 6
Governments	(as applied to the nationalities of the banks and governments)	(as applied to the nationalities of the banks and governments)
Retail	Pool of retail loans with probability of default of less than 2.25%	Pool of retail loans with probability of default of 2.25% or more
Corporate (loans and credit cards)	Internal credit rating of BBB+ or above	Internal credit rating of below BBB+

- (f) Nature and effect of modification in contractual cash flows

 - ii) As of December 31, 2019 and 2018, the book value of financial asset, for which contractual cash flows have been modified while the loss allowance was measured at an amount equal to lifetime expected credit losses at initial recognition, and the loss allowance reverted to being measured at an amount equal to 12-month expected credit losses during the years ended December 31, 2019 and 2018 were \(\prec{\psi}_3,782\) million and \(\prec{\psi}_1,159\) million.
- (g) The contractual amounts outstanding on financial assets that were written-off but were still subject to enforcement activity as of December 31, 2019 and 2018 were \(\forall 6,177,901\) million and \(\forall 6,043,744\) million, respectively.
- (h) As of December 31, 2019 and 2018, there were no assets acquired by the execution of collateral.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(i) Concentration by geographic location

An analysis of concentration by geographic location for financial instruments excluding equity securities, net of allowance, as of December 31, 2019 and 2018 were as follows:

						December 31, 20	19			
		Korea	U.S.A	U.K	Japan	Germany	Vietnam	China	Other	Total
Due from banks: (*1)										
Banks	W	207,825	1,188,903	376,785	226,145	151,213	235,046	1,971,924	534,571	4,892,412
Governments		14,084,796	529,096	-	1,080,381	-	140,960	445,526	348,526	16,629,285
		14,292,621	1,717,999	376,785	1,306,526	151,213	376,006	2,417,450	883,097	21,521,697
Loans at amortized cost:										
Banks		1,146,073	-	11,565	63,088	51,953	801,096	844,396	1,111,260	4,029,431
Retail		130,646,542	370,303	5,443	3,888,924	1,531	1,301,979	1,206,531	910,794	138,332,047
Governments		2,313,311	-	-	-	-	-	-	111,902	2,425,213
Corporate		106,038,123	2,892,333	42,803	3,353,511	98,980	2,140,520	2,758,146	5,911,237	123,235,653
Credit cards		6,370	1,415	88	56	30	140,915	40	1,006	149,920
	_	240,150,419	3,264,051	59,899	7,305,579	152,494	4,384,510	4,809,113	8,046,199	268,172,264
Loans at FVTPL		868,991	-	-	-	-	-	-	-	868,991
Securities at FVTPL		17,874,472	163,598	125,499	18,732	5,064	111	187,773	227,582	18,602,831
Securities at FVOCI		36,297,061	1,520,146	97,710	195,165	93,769	294,095	723,736	839,052	40,060,734
Securities at amortized cost		19,060,306	31,822	-	163,112	-	604,019	40,741	351,888	20,251,888
	W	328,543,870	6,697,616	659,893	8,989,114	402,540	5,658,741	8,178,813	10,347,818	369,478,405

^(*1) Geographical breakdown is the net book value, net of unrecognized balances and allowance for doubtful accounts.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(i) Concentration by geographic location (continued)

An analysis of concentration by geographic location for financial instruments excluding equity securities, net of allowance, as of December 31, 2019 and 2018 were as follows: (continued)

						December 31, 20	18			
		Korea	U.S.A	U.K	Japan	Germany	Vietnam	China	Other	Total
Due from banks: (*1)										
Banks	W	222,634	1,478,810	153,734	454,277	59,247	294,466	2,006,399	485,997	5,155,564
Governments		3,168,858	499,742	-	750,676	108,667	182,822	546,597	168,438	5,425,800
		3,391,492	1,978,552	153,734	1,204,953	167,914	477,288	2,552,996	654,435	10,581,364
Loans at amortized cost:										
Banks		5,180,244	15,360	108,842	186,618	154,151	627,411	1,215,043	1,238,087	8,725,756
Retail		118,927,400	358,470	4,432	3,440,600	2,119	1,031,270	971,159	650,269	125,385,719
Governments		688,261	-	-	-	-	-	=	2,397	690,658
Corporate		101,731,466	2,473,910	22,770	2,526,494	96,464	1,846,468	2,621,580	5,013,741	116,332,893
Credit cards		4,450	1,247	79	23	7	92,287	16	671	98,780
	_	226,531,821	2,848,987	136,123	6,153,735	252,741	3,597,436	4,807,798	6,905,165	251,233,806
Loans at FVTPL		645,237	_	-	-	-	_	-	_	645,237
Securities at FVTPL		15,063,058	53,863	158,055	27,064	11,507	-	88,297	87,268	15,489,112
Securities at FVOCI		29,020,711	646,873	21,749	197,234	46,417	392,668	616,143	493,751	31,435,546
Securities at amortized cost		16,081,956	24,689	-	68,594	-	360,953	34,923	253,285	16,824,400
	W	290,734,275	5,552,964	469,661	7,651,580	478,579	4,828,345	8,100,157	8,393,904	326,209,465

^(*1) Geographical breakdown is the net book value, net of unrecognized balances and allowance for doubtful accounts.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(j) Concentration by industry sector

An analysis of concentration by industry sector for financial instruments excluding equity securities, net of allowance, as of December 31, 2019 and 2018 were as follow:

						December 31, 2019)			
	_	Finance and insurance	Manufacturing	Retail and wholesale	Real estate and service	Construction service	Lodging and Restaurant	Other	Retail customers	Total
Due from banks: (*1)							· · · · · · · · · · · · · · · · · · ·			
Banks	W	4,892,412	-	-	-	-	-	-	-	4,892,412
Government		16,629,285	-	-	-	-	-	-	-	16,629,285
		21,521,697		_			-	-		21,521,697
Loans at amortized										
cost:										
Banks		3,540,249	-	-	-	-	-	489,182	-	4,029,431
Retail		-	-	-	-	-	-	-	138,332,047	138,332,047
Governments		2,425,213	-	-	-	-	-	-	-	2,425,213
Corporate		4,890,090	43,322,353	15,657,794	25,529,632	2,788,758	5,289,617	25,757,409		123,235,653
Credit cards		-	-	-	-	-	-	-	149,920	149,920
		10,855,552	43,322,353	15,657,794	25,529,632	2,788,758	5,289,617	26,246,591	138,481,967	268,172,264
Loans at FVTPL		130,129	478,130	120,432	-	3,500	900	135,900	-	868,991
Securities at FVTPL		12,197,372	1,445,115	859,395	180,444	179,604	55,096	3,685,805	-	18,602,831
Securities at FVOCI		23,143,896	2,172,089	319,380	572,971	707,837	2,779	13,141,782	-	40,060,734
Securities at										
amortized cost		7,099,533	49,876	-	108,112	120,492	-	12,873,875	-	20,251,888
	W	74,948,179	47,467,563	16,957,001	26,391,159	3,800,191	5,348,392	56,083,953	138,481,967	369,478,405

^(*1) Industrial breakdown is the net book value, net of unrecognized balances and allowance for doubtful accounts.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-1. Credit risk (continued)

(j) Concentration by industry sector (continued)

An analysis of concentration by industry sector for financial instruments excluding equity securities, net of allowance, as of December 31, 2019 and 2018 were as follow: (continued)

						December 31, 2018	8			
]	Finance and insurance	Manufacturing	Retail and wholesale	Real estate and service	Construction service	Lodging and Restaurant	Other	Retail customers	Total
Due from banks: (*1)										
Banks	V	5,155,564	-	-	-	-	-	-	-	5,155,564
Government		5,425,800	-	-	-	-	-	-	-	5,425,800
		10,581,364					-	-		10,581,364
Loans at amortized										
cost:										
Banks		8,369,039	2,219	-	300	-	-	354,198	-	8,725,756
Retail		_	-	-	-	-	-	-	125,385,719	125,385,719
Governments		690,658	-	-	-	-	-	-	-	690,658
Corporate		4,618,663	42,921,485	16,119,877	22,832,074	2,666,930	4,894,906	22,278,958	-	116,332,893
Credit cards		_	-	-	-	-	-	-	98,780	98,780
		13,678,360	42,923,704	16,119,877	22,832,374	2,666,930	4,894,906	22,633,156	125,484,499	251,233,806
Loans at FVTPL		62,005	178,827	208,633	20,004	1,000	900	173,868	-	645,237
Securities at FVTPL		10,749,389	824,042	1,032,448	124,471	141,749	60,829	2,556,184	-	15,489,112
Securities at FVOCI		19,383,586	1,468,235	242,857	332,101	357,281	-	9,651,486	-	31,435,546
Securities at										
amortized cost		4,630,825	99,437	-	61,275	30,454	=	12,002,409	-	16,824,400
Ţ	¥	59,085,529	45,494,245	17,603,815	23,370,225	3,197,414	4,956,635	47,017,103	125,484,499	326,209,465

^(*1) Industrial breakdown is the net book value, net of unrecognized balances and allowance for doubtful accounts.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

3. Financial risk management (continued)

3-2. Market risk

Market risk is the risk that changes in market price such as interest rates, equity prices, and foreign exchange rates, etc. will affect the Group's income. Trading position is exposed to the risk such as interest rates, equity prices, foreign exchange rates, etc., and non-trading position is mainly exposed to interest rates. The Group separates and manages its exposure to market risk between trading and non-trading position.

Overall authority for market risk is vested in the Risk Policy Committee. The Risk Management Department is responsible for the development of detailed risk management policies which are subject to review and approval by the Risk Policy Committee and for the day-to-day review of their implementation. The Risk Policy Committee also sets Value at Risk (VaR) limit, damage limit, sensitivity limit, investment limits, position limits, and stress damage limits of each department and desk. The Risk Management Department monitors operation departments and reports regularly to the Risk Policy Committee and the Risk Management Committee.

Before launching a new product from each business unit, the Group is required to perform an objective analysis of the risk evaluation and examination of fair value measurement method from the Risk Management Department or Fair Value Evaluation Committee. The Derivative and Structured Product Risk Review Committee reviews the related risk exposure and investment limit.

(a) Market risk management of trading positions

Trading position includes securities, foreign exchange position, and derivatives which are traded for profits.

Trading data of foreign exchange, stocks, bonds and derivatives from trading positions are tracked and daily risk limits are systematically monitored based on the Group's risk management parameters. Statistical analysis that complements the above risk management process and stress testing is performed regularly in order to manage the impact and loss of rapid economic changes. These risk management processes enable the Group to manage the scale of potential losses within a certain range when a crisis occurs.

i) Measurement method on market risk arising from trading positions

The Principal tool used to measure and control market risk exposure within the Group's trading position is VaR. The VaR of a trading position is the estimated loss that will arise on the portfolio over a specified period of time (ten days holding period) from an adverse market movement with a specified probability (confidence level). The Group measures market risk based on 99.9% confidence level by using the VaR model based on historical simulation.

VaR is a commonly used market risk management technique. However, VaR estimates possible losses over a certain period at a particular confidence level using the historical market movement data. The use of historical market movement data as a basis for determining the possible range of future outcome may not always cover all possible scenarios, especially those of an exceptional nature. VaR models assume that a holding period of generally one to ten days is sufficient prior to liquidating the underlying positions, but this may not be the case for certain highly illiquid assets or in situations in which there is severe general market illiquidity.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-2. Market risk (continued)

(a) Market risk management of trading positions (continued)

The Group directly applies the historical changes in interest rates, equity prices, and foreign exchange rates to current position. The actual outputs are regularly monitored by testing the effectiveness of assumptions, measurements and parameter. The application of this method does not prevent loss from larger market movement that exceeds the acceptable parameter.

VaR limit related to the operation of trading and non-trading portfolio is determined by management annually. VaR is measured at least daily. The quality of VaR model is monitored consistently by examining the VaR results related to trading book.

ii) VaR of trading positions

An analysis of trading position VaR for the years ended December 31, 2019 and 2018 were as follows:

		2019						
		Average	Maximum	Minimum	Year-end			
Interest rate risk	W	21,208	32,430	12,709	28,313			
Equity risk		18,136	49,424	8,171	15,386			
Foreign currency risk (*1)		24,727	29,085	22,259	25,910			
Volatility risk		161	325	60	212			
Commodity risk		15	104	-	10			
Covariance		(16,322)	(29,815)	(11,717)	(21,879)			
	W	47,925	81,553	31,482	47,952			

		2018						
		Average	Maximum	Minimum	Year-end			
Interest rate risk	W	22,559	29,748	16,194	18,797			
Equity risk		12,118	25,701	1,976	22,212			
Foreign currency risk (*1)		39,282	45,738	34,162	34,294			
Volatility risk		131	511	30	261			
Commodity risk		17	61	-	24			
Covariance		(30,150)	(44,297)	(14,337)	(21,298)			
	W	43,957	57,462	38,025	54,290			
	_							

^(*1) The Group measured foreign currency risk arising from trading positions and non-trading positions.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-2. Market risk (continued)

(b) Market risk management of non-trading positions

The most critical market risk that arises from non-trading position is the interest rate risk. Accordingly, the Group measures and manages market risk for non-trading position by taking into account effects of interest rate changes on both its net asset value and income. Interest rate risk is the risk of loss from fluctuations in the future cash flows or fair values of financial instruments because of a change in market interest rates.

Interest rate risk is managed principally through monitoring interest rate gaps and by having pre-approved limits for repricing bands. The Risk Policy Committee is the monitoring body for compliance with these limits including establishing policies and setting the limits and is assisted by the Risk Management Department in its day-to-day monitoring activities.

The Group measures and manages interest rate risk by using various analyses such as interest rate gap, duration gap, and NII (Net Interest Income) simulation of each scenario through the ALM system (OFSA). The Group also monitors interest rate VaR, earnings at risk ("EaR"), and gap rate of interest rate by setting the limits on a monthly basis.

i) Measurement method on market risk arising from non-trading positions

The Group calculates and manages the variable amount (rateVaR) of the net asset value (rateVaR) and the maximum expected interest loss (rate EaR) when the IRRBB Standard Method Rate Scenario is applied as presented by the Bank for International Settlements (BIS). The IRRBB Standard Method measures the interest rate risk by reflecting customer behavior models.

The Group uses six scenarios defined by the Basel Committee (① parallel up shock ② parallel down shock ③ Steepener shock ④ flattener shock ⑤ short rate up shock ⑥ short rate down shock) for calculating the interest rate risk. Based on six scenarios, the change in the value of the net asset is measured to calculate the maximum loss estimate (VaR: Value at Risk). The maximum expected amount of change in profit or loss (EaR: Earning at Risk) is calculated by measuring the change in net interest margin(economic value of equity) based on two scenarios(parallel up shock and parallel down shock).

ii) Interest rate VaR and EaR for non-trading positions

As of the December 31, 2019, in the IRRBB method based BIS, the existing interest rate VaR and the interest rate EaR are expressed as maximum loss forecast amount of \triangle EVE (Economic Value of Equity) and expected maximum profit or loss of \triangle NII (Net Interest Income), respectively. As of December 31, 2018, the value is based on the existing method of calculation as the regulation on the supervision of interest rate leeks was revised at the end of 2019.

		December 31, 2019	December 31, 2018
Interest rate VaR	W	369,944	301,152
Interest rate EaR		161,385	371,682

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-2. Market risk (continued)

(c) Foreign exchange risk

The Group manages foreign currency risk based on general positions which include all spot and future foreign currency positions, etc. The Risk Policy Committee oversees the Group's foreign exchange exposure for both trading and non-trading activities by establishing limits for the net foreign currencies open position. The Group's foreign exchange position is centralized at the S&T Center. Dealers in the S&T Center manage the Group's overall position within the set limits through spot trading, forward contracts, currency options, futures and swaps and foreign exchange swaps. The Group's foreign exchange transactions are mainly conducted in the U.S. dollar (USD), Japanese yen (JPY), euro (EUR) and Chinese yuan (CNY). Other foreign currencies are traded at smaller scale.

Foreign currency denominated assets and liabilities as of December 31, 2019 and 2018 were as follows:

		December 31, 2019					
	•	USD	JPY	EUR	CNY	Others	Total
Assets							
Cash and due from banks	W	3,396,827	1,486,422	291,647	1,701,072	1,585,448	8,461,416
Securities at FVTPL		910,503	14,205	115,969	-	231,441	1,272,118
Derivative assets		189,134	132	5,947	391	43,596	239,200
Loans at amortized cost		17,137,433	8,253,896	955,836	3,350,557	7,960,677	37,658,399
Securities at FVOCI		4,029,326	83,713	49,447	436,236	730,769	5,329,491
Securities at amortized cost		143,338	183,133	-	40,769	927,713	1,294,953
Other financial assets		2,643,932	136,419	169,709	380,955	436,219	3,767,234
	•	28,450,493	10,157,920	1,588,555	5,909,980	11,915,863	58,022,811
	•						
Liabilities							
Deposits		14,252,401	9,047,067	817,015	4,415,865	6,890,787	35,423,135
Financial liabilities at FVTPL	,	-	-	-	-	467,761	467,761
Derivative liabilities		147,097	574	10,272	1,158	4,923	164,024
Borrowings		7,689,213	343,308	190,366	407,767	139,658	8,770,312
Debt securities issued		4,918,347	319,041	704,504	-	895,196	6,837,088
Other financial liabilities		3,818,303	154,863	123,547	567,860	964,483	5,629,056
		30,825,361	9,864,853	1,845,704	5,392,650	9,362,808	57,291,376
Net assets (liabilities)		(2,374,868)	293,067	(257,149)	517,330	2,553,055	731,435
Off balance sheet items							
Derivative exposures		2,366,831	(17,970)	370,460	(113,087)	(651,093)	1,955,141
Net position	W	(8,037)	275,097	113,311	404,243	1,901,962	2,686,576

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-2. Market risk (continued)

(c) Foreign exchange risk (continued)

		December 31, 2018					
		USD	JPY	EUR	CNY	Others	Total
Assets	-						
Cash and due from banks	W	3,982,259	1,189,532	198,332	1,582,092	1,472,817	8,425,032
Securities at FVTPL		410,497	-	37,184	-	169,810	617,491
Derivative assets		111,036	285	2,299	406	11,875	125,901
Loans at amortized cost		15,522,744	6,859,420	1,275,174	3,496,937	5,934,618	33,088,893
Securities at FVOCI		2,628,613	125,512	-	357,682	696,230	3,808,037
Securities at amortized cost		116,333	128,512	-	34,955	617,648	897,448
Other financial assets		2,926,663	135,984	70,321	456,405	349,571	3,938,944
		25,698,145	8,439,245	1,583,310	5,928,477	9,252,569	50,901,746
	_						
Liabilities							
Deposits		13,016,480	7,207,653	693,052	4,553,334	5,216,302	30,686,821
Financial liabilities at FVTPL		-	-	-	-	458,934	458,934
Derivative liabilities		165,761	-	1,914	2,089	4,892	174,656
Borrowings		5,881,097	444,481	280,949	395,719	167,995	7,170,241
Debt securities issued		4,110,789	317,125	40,933	-	1,103,732	5,572,579
Other financial liabilities		2,621,974	192,161	125,434	573,544	540,510	4,053,623
		25,796,101	8,161,420	1,142,282	5,524,686	7,492,365	48,116,854
Net assets (liabilities)		(97,956)	277,825	441,028	403,791	1,760,204	2,784,892
Off balance sheet items							
Derivative exposures	_	316,006	(58,204)	(388,554)	(34,075)	(88,718)	(253,545)
Net position	W	218,050	219,621	52,474	369,716	1,671,486	2,531,347

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

3. Financial risk management (continued)

3-3. Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Risk Policy Committee is responsible for establishing policies and setting the limits related to liquidity risk management. The Risk Management Department evaluates and manages the Group's overall liquidity risk and monitors compliance of all operating subsidiaries and foreign branches with limits on a daily basis.

The Group applies the following basic principles for liquidity risk management:

- · raise funding in sufficient amounts at the optimal time and reasonable costs;
- maintain risk at appropriate levels and preemptively manage them through a prescribed risk limit system and an early warning signal detection system;
- secure stable sources of revenue and minimize actual losses by implementing an effective asset-liability management system based on diversified sources of funding with varying maturities;
- monitor and manage daily and intra-daily liquidity positions and risk exposures as to timely payment and settlement of financial obligations due under both normal and crisis situations;
- conduct periodic contingency analysis in anticipation of any potential liquidity crisis and establish and implement emergency plans in case of a crisis actually happening; and
- consider liquidity-related costs, benefits and risks in determining the price of products and services, employee
 performance evaluations and approval of launching new products and services.

The Group manages its liquidity risk within the limits set on won and foreign currency by using various analysis methods such as liquidity gap, real liquidity gap and loan-deposit ratio through the ALM system and various indices including risk limits, early warning index, and monitoring index.

The following table presents the Group's cash flows of financial assets and financial liabilities. The amounts disclosed in the table are the contractual undiscounted cash flows. Since the effect of the discount is insignificant for the balance with the maturities of less than 12 months, the amount is the same as the book value.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-3. Liquidity risk (continued)

(a) Contractual maturities for financial instruments

Contractual maturities for financial assets and financial liabilities as of December 31, 2019 and 2018 were as follows:

	_	December 31, 2019						
			1 month~	3 months~	6 months~	1 year~		
		1 month	3 months	6 months	1 year	5 years	More than	
		or less	or less	or less	or less	or less	5 years	Total
Assets	_							
Cash and due from banks	₩	22,806,554	921,391	274,169	64,955	10,654	-	24,077,723
Securities at FVTPL		16,851,906	1,572,807	55,050	217,286	20,113	-	18,717,162
Derivative assets		1,973,064	48,668	62,652	108,511	605,246	468,125	3,266,266
Loans at amortized cost		17,115,192	28,494,229	39,319,088	66,690,540	84,350,527	63,847,488	299,817,064
Loans at FVTPL		238	659,252	9,758	55,527	156,642	-	881,417
Securities at FVOCI		38,857,291	-	-	-	-	1,906,785	40,764,076
Securities at amortized cost		1,124,894	1,886,432	1,504,340	1,845,395	14,741,435	732,876	21,835,372
Other financial assets		10,535,390	-	1,168	120,583	7,155	2,905,342	13,569,638
	₩	109,264,529	33,582,779	41,226,225	69,102,797	99,891,772	69,860,616	422,928,718
Liabilities								
Deposits	₩	146,595,234	30,679,366	37,192,422	60,082,721	14,138,283	3,550,638	292,238,664
Financial liabilities at								
FVTPL		437,324	1,096	12,095	10,455	48,609	-	509,579
Derivative liabilities		1,887,965	35,095	45,477	84,498	485,866	321,736	2,860,637
Borrowings		3,882,923	2,850,525	2,430,488	3,395,460	3,836,280	1,214,468	17,610,144
Debt securities issued		2,360,218	3,310,200	3,844,562	6,420,144	20,403,191	3,903,125	40,241,440
Other financial liabilities		17,833,873	32,069	44,942	177,227	21,228	2,539,730	20,649,069
	W	172,997,537	36,908,351	43,569,986	70,170,505	38,933,457	11,529,697	374,109,533

These amounts include cash flows of principal and interest on financial assets and financial liabilities. The undiscounted cash flows were classified based on the earliest dates for obligated repayment. Financial assets at FVTPL and financial assets at FVOCI except for assets restricted for sale for certain periods were included in 1 month or less.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-3. Liquidity risk (continued)

(a) Contractual maturities for financial instruments (continued)

	-	December 31, 2018						
	-		1 month~	3 months~	6 months~	1 year~		
		1 month	3 months	6 months	1 year	5 years	More than	
		or less	or less	or less	or less	or less	5 years	Total
Assets	•							
Cash and due from banks	W	11,756,787	675,537	673,225	82,202	58	-	13,187,809
Securities at FVTPL		15,612,433	-	-	-	-	-	15,612,433
Derivative assets		1,472,004	50,498	66,815	106,966	495,274	262,007	2,453,564
Loans at amortized cost		22,225,699	26,584,311	38,564,391	60,699,972	74,171,256	60,271,062	282,516,691
Loans at FVTPL		28,221	386,353	39,154	102,394	101,725	-	657,847
Securities at FVOCI		31,466,977	-	-	-	-	411,371	31,878,348
Securities at amortized cost		482,234	1,298,891	396,923	2,061,008	13,527,891	801,152	18,568,099
Other financial assets		13,152,211	-	-	-	-	1,110,556	14,262,767
	W	96,196,566	28,995,590	39,740,508	63,052,542	88,296,204	62,856,148	379,137,558
Liabilities	-					_		_
Deposits	W	132,868,333	23,977,712	33,362,815	54,459,955	14,567,195	2,835,925	262,071,935
Financial liabilities at								
FVTPL		459,336	193	53	10,403	10,124	-	480,109
Derivative liabilities		1,671,223	40,891	56,711	102,831	523,026	272,663	2,667,345
Borrowings		3,739,100	2,675,305	2,022,551	2,777,822	4,164,139	1,103,572	16,482,489
Debt securities issued		2,402,156	4,023,015	3,917,384	6,779,292	13,497,283	3,399,603	34,018,733
Other financial liabilities		15,377,699				130,122		15,507,821
	W	156,517,847	30,717,116	39,359,514	64,130,303	32,891,889	7,611,763	331,228,432

These amounts include cash flows of principal and interest on financial assets and financial liabilities. The undiscounted cash flows were classified based on the earliest dates for obligated repayment. Financial assets at FVTPL and financial assets at FVOCI except for assets restricted for sale for certain periods were included in 1 month or less.

(b) Contractual maturities for off balance sheet items

Financial guarantees such as financial guarantee contracts, loan commitments and others provided by the Group are classified based on the earliest date at which the Group should fulfil the obligation under the guarantee when the counterparty requests for the payment.

Off balance sheet items as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Financial guarantee contracts	W	4,676,823	4,391,207
Loan commitments and others		97,161,128	91,002,891
	W	101,837,951	95,394,098

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

3. Financial risk management (continued)

3-4. Measurement of fair value

The fair value which the Group primarily uses for measurement of financial instruments are the published price quotations in an active market which are based on the market prices or the dealer price quotations of financial instruments traded in an active market where available, which is the best evidence of fair value.

If the market for a financial instrument is not active, fair value is established either by using a valuation technique or independent third-party valuation service. The Group uses diverse valuation techniques under reasonable assumptions which are based on the inputs observable in markets at the end of each reporting period.

Valuation techniques include using the recent arm's length market transactions between knowledgeable, willing parties, if available, reference to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models. For example, the fair value for interest swaps is the present value of estimated future cash flows, and fair value for foreign exchange forwards contracts is measured by using the published forward exchange rate at the end of each reporting period.

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

- (i) Level 1: Financial instruments measured at quoted prices from active markets are classified as level 1.
- (ii) Level 2: Financial instruments measured using valuation techniques where all significant inputs are observable market data are classified as level 2.
- (iii)Level 3: Financial instruments measured using valuation techniques where one or more significant inputs are not based on observable market data are classified as level 3.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

- (a) Financial instruments measured at fair value
 - i) The table below analyzes financial instruments measured at the fair value as of December 31, 2019 and 2018 by the level in the fair value hierarchy into which the fair value measurement is categorized:

		December 31, 2019					
	_	Level 1	Level 2	Level 3	Total		
Financial assets	_						
Loans at FVTPL:							
Loans	W	=	686,446	182,545	868,991		
Securities at FVTPL:							
Debt securities		1,525,682	15,005,677	1,959,757	18,491,116		
Equity securities		62,349	-	50,967	113,316		
Gold/silver deposits		111,715	-	-	111,715		
Derivative assets:							
Trading		-	1,941,199	4,457	1,945,656		
Hedging		-	153,561	2,776	156,337		
Securities at FVOCI:							
Debt securities		9,431,530	30,629,204	-	40,060,734		
Equity securities	_	183,078	<u> </u>	412,093	595,171		
	₩	11,314,354	48,416,087	2,612,595	62,343,036		
Financial liabilities	_				_		
Financial liabilities at FVTPL:							
Securities sold	W	40,320	=	-	40,320		
Gold/silver deposits		467,761	-	-	467,761		
Derivative liabilities:							
Trading		197	1,679,316	4,240	1,683,753		
Hedging	_	<u> </u>	20,329	189,750	210,079		
	₩	508,278	1,699,645	193,990	2,401,913		

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

		December 31, 2018				
		Level 1	Level 2	Level 3	Total	
Financial assets						
Loans at FVTPL:						
Loans	W	-	407,996	237,241	645,237	
Securities at FVTPL:						
Debt securities		1,039,563	13,020,589	1,274,079	15,334,231	
Equity securities		79,567	-	43,754	123,321	
Gold/silver deposits		154,881	-	-	154,881	
Derivative assets:						
Trading		-	1,440,695	2,675	1,443,370	
Hedging		-	36,502	4,586	41,088	
Securities at FVOCI:						
Debt securities		9,223,783	22,211,763	-	31,435,546	
Equity securities		135,815		306,987	442,802	
:	₩	10,633,609	37,117,545	1,869,322	49,620,476	
Financial liabilities						
Financial liabilities at FVTPL:						
Securities sold	W	20,625	-	-	20,625	
Gold/silver deposits		458,934	-	-	458,934	
Derivative liabilities:						
Trading		953	1,295,021	2,658	1,298,632	
Hedging		<u>-</u>	111,833	361,120	472,953	
2	₩	480,512	1,406,854	363,778	2,251,144	

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

- (a) Financial instruments measured at fair value (continued)
 - ii) There was no transfer between level 1 and level 2 for the years ended December 31, 2019 and 2018.
 - iii) Changes in level 3 of the fair value hierarchy

Changes in level 3 of the fair value hierarchy for the years ended December 31, 2019 and 2018 were as follows:

			D	ecember 31, 2019			
	_	Loans at FVTPL	Securities at FVTPL	Securities at FVOCI	Net derivative instruments	Total	
Beginning balance	W	237,241	1,317,833	306,987	(356,517)	1,505,544	
Total gain or loss:							
Recognized in profit or loss							
(*1)		38	29,026	-	106,279	135,343	
Recognized in other comprehensive income		_	_	19,531	_	19,531	
Purchases/issues		96,171	1,272,266	92,861	(561)	1,460,737	
Settlements		(150,905)	(617,047)	72,001	63,828	(704,124)	
Others (*2)		(130,703)	(017,047)	(7,286)	05,020	(7,286)	
Transfers into level 3 (*3)			11,906	(7,200)	248	12,154	
Transfers from level 3 (*3)			(3,260)		(34)	(3,294)	
Ending balance	W	182,545	2,010,724	412,093	(186,757)	2,418,605	
Ending balance		102,343	2,010,724	412,093	(100,737)	2,410,003	
		December 31, 2018					
	_	Loans at	Securities at	Securities at	Net derivative		
	_	FVTPL	FVTPL	FVOCI	instruments	Total	
Beginning balance	W	113,168	841,791	279,560	(418,594)	815,925	
Total gain or loss:							
Recognized in profit or loss		2.012	270.000		56.262	220.252	
(*1)		3,012	278,898	-	56,362	338,272	
Recognized in other comprehensive income		_	_	27,484	_	27,484	
Purchases/issues		187,474	292,109	,, _	(779)	478,804	
Settlements		(66,413)	(94,965)	(57)	6,487	(154,948)	
Transfers into level 3 (*3)		-	(> .,> 55)	-	7	7	
Ending balance	w	237,241	1,317,833	306,987	(356,517)	1,505,544	

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

- (a) Financial instruments measured at fair value (continued)
 - (*1) Gains or losses among the changes in level 3 of the fair value hierarchy and gains or losses related to financial instruments that the Group held as of December 31, 2019 and 2018 were presented in the consolidated statements of comprehensive income as follows:

	_	December	31, 2019	December 31, 2018		
		Gains or losses recognized in profit or loss	Gains or losses recognized in profit or loss for financial instrument held at the end of the year	Gains or losses recognized in profit or loss	Gains or losses recognized in profit or loss for financial instrument held at the end of the year	
Net gain on financial assets at FVTPL Net other operating income	w	29,532 105,811	28,840 105,811	282,700 55,572	278,007 55,572	
	₩	135,343	134,651	338,272	333,579	

^(*2) These financial instruments were reclassified to investments in associates.

^(*3) These financial instruments were transferred into or out of level 3 as the availability of observable market data has changed. The Group recognized transfers between levels of the fair value hierarchy at the end of the reporting period during which the event or the change in circumstances that caused the transfer has occurred.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

- (a) Financial instruments measured at fair value (continued)
 - iv) Valuation techniques and inputs used in measuring fair value of financial instruments
 - ⓐ Valuation techniques and inputs used in measuring fair value of financial instruments classified as level 2 as of December 31, 2019 and 2018 were as follows:

_	December 31, 2019							
	Type of financial instruments		Book value	Valuation techniques	Inputs			
Financial assets				-				
Loans at FVTPL		₩	686,446	Discounted cash flow	Discount rate			
Securities at FVTPL	Dilimonation		15 005 (77	Discounted cash flow	Discount rate			
	Debt securities		15,005,677	Net asset value	Price of underlying assets			
Derivative assets	Trading		1,941,199	Option model,	Discount rate, foreign			
	Hedging		153,561	Discounted cash flow	exchange rate, volatility, stock price, commodity index, etc.			
			2,094,760					
Securities at FVOCI	Debt securities	•	30,629,204	Discounted cash flow	Discount rate			
		₩	48,416,087					
Financial liabilities		,						
Derivative liabilities	Trading Hedging	₩	1,679,316 20,329	Option model, Discounted cash flow	Discount rate, foreign exchange rate, volatility, stock price, commodity index, etc.			
		W	1,699,645					

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

_	December 31, 2018							
	Type of financial instruments		Book value	Valuation techniques	Inputs			
Financial assets		=						
Loans at FVTPL		₩	407,996	Discounted cash flow	Discount rate			
Securities at FVTPL	D.L		12 020 590	Discounted cash flow	Discount rate			
	Debt securities		13,020,589	Net asset value	Price of underlying assets			
Derivative assets	Trading Hedging		1,440,695 36,502	Option model, Discounted cash	Discount rate, foreign exchange rate, volatility,			
			1 455 105	flow	stock price, commodity index, etc.			
Securities at FVOCI			1,477,197	Discounted cash	Discount rate			
	Debt securities	W	22,211,763 37,117,545	flow				
Financial liabilities								
Derivative liabilities	Trading Hedging	W	1,295,021 111,833	Option model, Discounted cash flow	Discount rate, foreign exchange rate, volatility, stock price, commodity index, etc.			
		₩	1,406,854					

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

- (a) Financial instruments measured at fair value (continued)
 - (b) Information about valuation techniques and significant unobservable inputs in measuring financial instruments categorized as level 3 as of December 31, 2019 and 2018 were as follows:

	December 31, 2019								
	Valuation technique	Type of financial instrument		Book value	Significant unobservable input	Range of estimates for unobservable input			
Financial assets		•	='						
Loans at FVTPL	Option model (*1)	Loans	₩	182,545	Volatility of underlying assets	13.21%~46.36%			
Securities at FVTPL	Net asset value method	Debt securities		1,959,757	Price of underlying assets Discount rate Terminal growth rate	-			
	Discounted cash flow	Equity securities		50,967		5.06%~15.42% 0.00%			
				2,010,724					
Derivative assets	Option model (*2)	Equity and foreign exchange related		2,844	Volatility of underlying assets	1.51%~22.24%			
	Option model (*2)	Interest rates related		4,389	Volatility of underlying assets	0.50%~0.67%			
				7,233	Regression coefficient Correlations	1.30%~1.57% 59.53%			
Securities at FVOCI	Discounted cash flow	Equity securities	W	412,093 2,612,595	Discount rate Terminal growth rate	7.78%~19.21% 0.00%			
Financial liabilities									
Derivative liabilities	Option model (*2)	Equity and foreign exchange related	₩	3,141	Volatility of underlying assets	1.51%~22.24%			
	Option model (*2)	Interest rates related		190,849	Volatility of underlying assets	0.50%~0.67%			
			177	102.000	Regression coefficient Correlations	1.30%~2.77% 45.06%~90.34%			
			W	193,990					

^(*1) The Group uses binominal tree option model when measuring the fair value for loans at FVTPL.

^(*2) Option models that the Group uses in derivative valuation include Black-Scholes model, Hull-White model, Monte Carlo simulation, etc.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(a) Financial instruments measured at fair value (continued)

	December 31, 2018							
	Valuation technique	Type of financial instrument		Book value	Significant unobservable input	Range of estimates for unobservable input		
Financial assets Loans at FVTPL	Option model (*1)	Loans	W	237,241	Volatility of underlying assets	16.39%~42.56%		
Securities at FVTPL	Net asset value method Discounted cash flow	Debt securities Equity securities		1,274,079 43,754 1,317,833	Price of underlying assets Discount rate Terminal growth rate	- 5.80%~17.00% 0.00%		
Derivative assets	Option model (*2)	Equity and foreign exchange related		145	Volatility of underlying assets	2.20%~25.96%		
	Option model (*2)			7,116	Volatility of underlying assets Regression coefficient Correlations	0.47%~0.78% 0.42%~1.65% 44.93%~90.34%		
Securities at FVOCI	Discounted cash flow	Equity securities	₩	7,261 306,987 1,869,322	Discount rate Terminal growth rate	8.43%~17.40% 0.00%		
Financial liabilities Derivative liabilities	Option model (*2)	Equity and foreign exchange	w	257	Volatility of underlying assets	2.20%~25.96%		
	Option model (*2)	related Interest rates related	W	363,521	Volatility of underlying assets Regression coefficient Correlations	0.47%~0.78% 0.42%~2.77% 28.15%~90.34%		

^(*1) The Group uses binominal tree option model when measuring the fair value for loans at FVTPL.

^(*2) Option models that the Group uses in derivative valuation include Black-Scholes model, Hull-White model, Monte Carlo simulation, etc.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

- (a) Financial instruments measured at fair value (continued)
 - v) Sensitivity to changes in unobservable inputs.

For level 3 fair value measurement, changing one or more of the unobservable inputs used to reasonably possible alternative assumptions would have the following effect on profit (loss), and other comprehensive income (loss) as of December 31, 2019 and 2018 were as follows:

			December 31, 2019				
		_			Other com	prehensive	
		_	Profit (loss)	for the year	income (loss) for the year		
			Favorable	Unfavorable	Favorable	Unfavorable	
Type of financia	al instrument		change	change	change	change	
Loans at FVTPL (*1)		W	9,925	(3,431)			
Securities at FVTPL (*2)	Debt securities (*3)		790	(534)	-	-	
	Equity securities		10,096	(2,485)	-	-	
Derivative assets (*1)	Equity and foreign						
	exchange related		9	(9)	-	-	
	Interest rates related		543	(1,151)	-	-	
Securities at FVOCI (*2)	Equity securities	_	<u>-</u>		16,228	(7,943)	
		W	21,363	(7,610)	16,228	(7,943)	
Derivative liabilities (*1)	Equity and foreign	_					
	exchange related	W	16	(21)	-	-	
	Interest rates related		7,119	(10,597)	-	-	
		W	7,135	(10,618)			
		_					

- (*1) Based on 10% of increase or decrease in volatility of underlying assets or correlations.
- (*2) Based on changes in growth rate (0%~1%) and discount rate (-1%p~1%p).
- (*3) \(\pi\)1,959,757 million of Securities at FVTPL classified as level 3 are excluded from sensitivity analysis since calculation of sensitivity according to the fluctuation of input variables is impracticable.

		_	December 31, 2018				
		_			Other comp	prehensive	
		_	Profit (loss)	for the year	income (loss)) for the year	
			Favorable	Unfavorable	Favorable	Unfavorable	
Type of financia	al instrument		change	change	change	change	
Loans at FVTPL (*1)		W	8,858	(7,233)	-		
Securities at FVTPL (*2)	Debt securities (*3)		1,176	(807)	-	-	
	Equity securities		3,256	(1,754)	-	-	
Derivative assets (*1)	Equity and foreign						
	exchange related		57	(38)	-	-	
	Interest rates related		461	(701)	-	-	
Securities at FVOCI (*2)	Equity securities	_	<u>-</u>	<u> </u>	8,596	(4,843)	
		W	13,808	(10,533)	8,596	(4,843)	
Derivative liabilities (*1)	Equity and foreign	_					
,	exchange related	W	854	(912)	-	_	
	Interest rates related		10,186	(10,362)	-	-	
		W	11,040	(11,274)			
		_					

- (*1) Based on 10% of increase or decrease in volatility of underlying assets or correlations.
- (*2) Based on changes in growth rate $(0\%\sim1\%)$ and discount rate $(-1\%p\sim1\%p)$.
- (*3) \(\psi\)1,274,079 million of Securities at FVTPL classified as level 3 are excluded from sensitivity analysis since calculation of sensitivity according to the fluctuation of input variables is impracticable.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

- (b) Financial instruments measured at amortized cost
 - i) The method of measuring the fair value of financial instruments measured at amortized cost is as follows:

Type	Measurement methods of fair value
Cash and due from banks	The book value and the fair value for cash are identical and most of deposits are floating interest rate deposits or next day deposits of a short-term instrument. Therefore, the book value for deposits approximates fair value.
Loans at amortized cost	The fair value of loans at amortized cost is measured by discounting the expected cash flows at the market interest rate, credit risk, etc.
Securities at amortized cost	The fair value of securities at amortized cost is determined by applying the lesser of two quoted bond prices provided by two bond pricing agencies as of the latest trading date.
Deposits and borrowings	The book amount and the fair value for demand deposits, cash management account deposits, call money and bonds sold under repurchase agreements as short-term instruments are identical. The fair value of others is measured by discounting the contractual cash flows at the market interest rate that takes into account the residual risk.
Debt securities issued	The fair value of deposits and borrowings is based on the published price quotations in an active market. In case there is no observable market price, it is measured by discounting the contractual cash flow at the market interest rate that takes into account the residual risk.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

- (b) Financial instruments measured at amortized cost (continued)
 - ii) The book value and the fair value of financial instruments measured at amortized cost as of December 31, 2019 and 2018 were as follows:

	_		De	ecember 31, 2019	9	
	_		Book	value		
	_		Unamortized			
	_	Balance	balance	Allowance	Total	Fair value
Assets						
Cash and due from banks:						
Cash	₩	2,528,135	-	-	2,528,135	2,528,135
Due from banks		21,533,540	-	(11,843)	21,521,697	21,521,697
Loans at amortized cost:						
Household loans		123,219,603	414,301	(294,413)	123,339,491	124,412,436
Corporate loans		139,966,542	81,659	(1,212,105)	138,836,096	139,933,865
Public and other loans		3,189,535	1,843	(13,991)	3,177,387	3,195,896
Loans to bank		2,672,514	-	(3,156)	2,669,358	2,683,959
Credit card receivables		153,436	-	(3,504)	149,932	153,221
Securities at amortized cost:						
Government bonds		12,570,196	-	(1,297)	12,568,899	12,818,958
Financial institutions bonds		3,378,630	-	(1,766)	3,376,864	3,385,515
Corporate bonds and others		4,141,357	-	(2,248)	4,139,109	4,193,185
Others		167,016	-	-	167,016	167,016
Other financial assets		13,569,639	(33,431)	(17,679)	13,518,529	13,533,577
	W	327,090,143	464,372	(1,562,002)	325,992,513	328,527,460
Liabilities	=	<u> </u>	· · · · · · · · · · · · · · · · · · ·			
Deposits:						
Demand deposits	W	115,216,336	-	-	115,216,336	115,216,336
Time deposits		153,948,680	_	_	153,948,680	153,983,773
Negotiable certificates of deposits		9,694,816	_	_	9,694,816	9,701,825
Note discount deposits		4,747,587	_	_	4,747,587	4,747,425
CMA (*1)		3,987,372	_	_	3,987,372	3,987,372
Others		20,478	_	_	20,478	20,477
Borrowings:		,			,,,,	,
Call money		538,247	_	_	538,247	538,247
Bill sold		19,070	_	_	19,070	19,035
Bonds sold under repurchase		17,070			15,070	17,033
agreements		103,489	_	_	103,489	103,489
Borrowings		16,666,089	(1,011)	_	16,665,078	16,797,478
Debt securities issued:		10,000,000	(1,011)	_	10,005,076	10,777,470
Debt securities issued in Korean						
won		31,267,846	(40,736)		31,227,110	31,516,933
		31,207,040	(40,730)	-	31,227,110	31,310,933
Debt securities issued in foreign currencies		6,837,089	(34,331)		6,802,758	6,900,373
Other financial liabilities		20,658,284	(25,109)	-	20,633,175	20,643,591
Onici illianciai naointies	137					
	W _	363,705,383	(101,187)		363,604,196	364,176,354

(*1) CMA: Cash management account deposits

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost (continued)

			De	ecember 31, 2018	8	
	_		Book	value		
	_		Unamortized			
	_	Balance	balance	Allowance	Total	Fair value
Assets						
Cash and due from banks:						
Cash	₩	2,568,913	-	-	2,568,913	2,568,913
Due from banks		10,596,149	-	(14,785)	10,581,364	10,581,364
Loans at amortized cost:						
Household loans		112,594,439	418,020	(305,288)	112,707,171	113,677,417
Corporate loans		133,399,567	76,685	(1,339,174)	132,137,078	133,163,232
Public and other loans		2,729,075	1,558	(20,053)	2,710,580	2,733,532
Loans to bank		3,586,594	-	(6,395)	3,580,199	3,581,605
Credit card receivables		103,580	-	(4,802)	98,778	103,175
Securities at amortized cost:						
Government bonds		11,695,562	-	(1,454)	11,694,108	11,793,483
Financial institutions bonds		929,757	-	(357)	929,400	931,157
Corporate bonds and others		4,129,043	-	(2,953)	4,126,090	4,165,754
Others		74,802	-	-	74,802	74,802
Other financial assets		14,262,768	(36,355)	(25,612)	14,200,801	14,218,601
	W	296,670,249	459,908	(1,720,873)	295,409,284	297,593,035
Liabilities		296,670,249	459,908	(1,720,873)	295,409,284	297,593,035
Deposits:		2,0,0,0,2.,	,,,,,	(1,720,070)	2,2,10,,20.	257,050,000
Demand deposits	W	104,998,305	_	_	104,998,305	104,998,305
Time deposits		135,486,566	_	_	135,486,566	135,414,254
Negotiable certificates of deposits		9,213,652	_	_	9,213,652	9,265,012
Note discount deposits		4,087,529	_	_	4,087,529	4,087,338
CMA (*1)		4,084,709	_	_	4,084,709	4,084,709
Others		21,963	_	_	21,963	21,963
Borrowings:		21,505			21,505	21,505
Call money		960,162	_	_	960,162	960,162
Bill sold		14,536	_	_	14,536	14,506
Bonds sold under repurchase		1.,000			1.,000	1.,000
agreements		83,028	_	_	83,028	83,028
Borrowings		15,098,953	(1,858)	_	15,097,095	15,163,551
Debt securities issued:		13,070,733	(1,050)		13,077,073	13,103,331
Debt securities issued in Korean						
won		26,418,732	(62,944)	_	26,355,788	26,625,655
Debt securities issued in foreign		20,110,732	(02,711)		20,333,700	20,023,033
currencies		5,572,580	(29,102)	_	5,543,478	5,345,938
Other financial liabilities		15,462,193	(2,118)	_	15,460,075	15,443,585
Carol Infancial natimites	W	321,502,908	(96,022)		321,406,886	321,508,006
		321,302,700	(70,022)		321,700,000	341,300,000

^(*1) CMA: Cash management account deposits

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

- (b) Financial instruments measured at amortized cost (continued)
 - iii) Fair value hierarchy of financial instruments which are not measured at fair value in the consolidated statements of financial position as of December 31, 2019 and 2018 were as follows:

			December 31	, 2019	
		Level 1	Level 2	Level 3	Total
Assets					
Cash and due from banks:					
Cash	W	2,528,135	-	-	2,528,135
Due from banks		· · · · · -	21,521,697	-	21,521,697
Loans at amortized cost:					
Household loans		-	-	124,412,436	124,412,436
Corporate loans		-	-	139,933,865	139,933,865
Public and other loans		-	-	3,195,896	3,195,896
Loans to bank		-	1,011,760	1,672,199	2,683,959
Credit card receivables		-	-	153,221	153,221
Securities at amortized cost:					
Government bonds		1,234,229	11,584,729	-	12,818,958
Financial institutions bonds		2,252,484	1,133,031	-	3,385,515
Corporate bonds and others		-	4,193,185	-	4,193,185
Others		-	167,016	-	167,016
Other financial assets		<u>- </u>	10,813,821	2,719,756	13,533,577
	W	6,014,848	50,425,239	272,087,373	328,527,460
Liabilities					
Deposits:					
Demand deposits	W	-	115,216,336	_	115,216,336
Time deposits		_	, , , <u>-</u>	153,983,773	153,983,773
Negotiable certificates of deposits		_	_	9,701,825	9,701,825
Note discount deposits		_	_	4,747,425	4,747,425
CMA		_	3,987,372	-	3,987,372
Others		_	-	20,477	20,477
Borrowings:				-0,.,,	20,.,,
Call money		_	538,247	_	538,247
Bill sold		_	-	19,035	19,035
Bonds sold under repurchase				17,033	19,055
agreements		-	-	103,489	103,489
Borrowings		_	_	16,797,478	16,797,478
Debt securities issued:					,,,,,,,
Debt securities issued in Korean					
won		-	29,459,639	2,057,294	31,516,933
Debt securities issued in foreign					
currencies		-	6,900,373	-	6,900,373
Other financial liabilities		<u> </u>	7,932,723	12,710,868	20,643,591
	₩ <u></u>	<u> </u>	164,034,690	200,141,664	364,176,354

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(b) Financial instruments measured at amortized cost (continued)

		December 31	, 2018	
	Level 1	Level 2	Level 3	Total
Assets				
Cash and due from banks:				
Cash W	2,568,913	_	_	2,568,913
Due from banks	, ,	10,581,364	-	10,581,364
Loans at amortized cost:				
Household loans	-	-	113,677,417	113,677,417
Corporate loans	-	-	133,163,232	133,163,232
Public and other loans	-	-	2,733,532	2,733,532
Loans to bank	-	2,499,812	1,081,793	3,581,605
Credit card receivables	-	-	103,175	103,175
Securities at amortized cost:	7 60.04 0	44.004.654		44 500 400
Government bonds	768,812	11,024,671	-	11,793,483
Financial institutions bonds	719,925	211,232	-	931,157
Corporate bonds and others	-	4,165,754	-	4,165,754
Others	-	74,802	-	74,802
Other financial assets	<u> </u>	11,606,370	2,612,231	14,218,601
₩ <u></u>	4,057,650	40,164,005	253,371,380	297,593,035
Liabilities				
Deposits:				
Demand deposits w	_	104,998,305	-	104,998,305
Time deposits	_	-	135,414,254	135,414,254
Negotiable certificates of deposits	_	_	9,265,012	9,265,012
Note discount deposits	_	_	4,087,338	4,087,338
CMA	_	4,084,709	1,007,550	4,084,709
Others	_	4,004,707	21,963	21,963
Borrowings:	-	-	21,903	21,903
Call money		960,162		960,162
Bill sold	-	900,102	14.506	
	-	-	14,506	14,506
Bonds sold under repurchase agreements	_	_	83,028	83,028
Borrowings	_	-	15,163,551	
Debt securities issued:	-	-	13,103,331	15,163,551
Debt securities issued in Korean				
Won	_	23,756,717	2,868,938	26,625,655
Debt securities issued in foreign		23,730,717	2,000,730	20,025,055
currencies	_	5,345,938	_	5,345,938
Other financial liabilities	-	6,630,726	8,812,859	15,443,585
w —		145,776,557	175,731,449	321,508,006

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

- (b) Financial instruments measured at amortized cost (continued)
 - iv) For financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed, valuation techniques and inputs used in measuring fair value of financial instruments classified as level 2 or level 3 as of December 31, 2019 and 2018 were as follows:

			Dece	ember 31, 2019		
	Type of financial			Valuation		
Level	instrument		Fair value (*1)	technique	Inputs	
Level 2	Securities at amortized cost	₩	17,077,961		Discount rate	
Level 3	Loans at amortized cost		269,367,617	Discounted cash flow	Discount rate, Credit spread, Prepayment rate	
	Other financial assets		2,719,756		Discount rate	
		W	289,165,334			
Level 2	Debt securities issued	W	36,360,012		Discount rate	
Level 3	Deposits (*1)		167,085,475		Discount rate	
	Borrowings (*1)		11,797,989	D' . 1	Discount rate	
	Debt securities issued		2,057,294	Discounted cash flow	Discount rate, Regression coefficient, Correlation coefficient	
	Other financial liabilities		12,710,868		Discount rate	
		W	230,011,638			

(*1) The amounts, which were not evaluated by the valuation technique, are not included and disclosed because the carrying amount is the reasonable approximation of fair value.

			Dece	ember 31, 2018	
	Type of financial			Valuation	
Level	instrument		Fair value (*1)	technique	Inputs
Level 2	Securities at amortized cost	W	15,476,459		Discount rate
Level 3	Loans at amortize cost Other financial	ed	250,759,149	Discounted cash flow	Discount rate, Credit spread, Prepayment rate
	assets	W	2,612,231 268,847,839		Discount rate
Level 2	Debt securities	-			
	issued	W	29,102,655		Discount rate
Level 3	Deposits (*1)		147,759,425		Discount rate
	Borrowings (*1)		10,380,014	Discounted	Discount rate Discount rate, Regression
	Debt securities			cash flow	coefficient, Correlation
	issued		2,868,938		coefficient
	Other financial		, ,		
	liabilities		8,812,859		Discount rate
		W	198,923,891		

(*1) The amounts, which were not evaluated by the valuation technique, are not included and disclosed because the carrying amount is the reasonable approximation of fair value.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(c) Deferred day one profit or loss for the years ended December 31, 2019 and 2018 were as follows:

		Beginning			Ending
	_	balance	Deferred	Amortization	balance
Loans at FVTPL	W	(4,510)	(3,825)	2,582	(5,753)
Securities at FVTPL		4	2	(6)	_
	W	(4,506)	(3,823)	2,576	(5,753)
			December	r 31, 2018	
		Beginning			Ending
	_	balance	Deferred	Amortization	balance
Loans at FVTPL	W	(4,929)	(2,506)	2,925	(4,510)
Securities at FVTPL		- -	4	-	4
	₩	(4,929)	(2,502)	2,925	(4,506)

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(d) Classification by category of financial instruments

Financial assets and liabilities were measured at fair value or amortized cost. Financial instruments measured at fair value or amortized costs were measured in accordance with the Group's valuation methodologies, which were described in Note 2.

The carrying amounts of each category of financial instruments as of December 31, 2019 and 2018 were as follows:

	_				Decembe	r 31, 2019		
		Financial assets at		incial	Financial assets designated at	Financial assets at	Derivatives held for	
		FVTPL	FV	OCI	FVOCI	amortized cost	hedging	Total
Assets								·
Due from banks	W	-		-	-	21,521,697	-	21,521,697
Securities at FVTPL		18,716,147		-	-	-	-	18,716,147
Derivative assets		1,945,656		-	-	-	156,337	2,101,993
Loans at FVTPL Loans at amortized		868,991		-	-	-	-	868,991
cost		-		-	-	268,172,264	-	268,172,264
Securities at FVOCI Securities at		-	40,	060,734	595,171	-	-	40,655,905
amortized cost Other financial		-		-	-	20,251,888	-	20,251,888
assets	_	<u> </u>				13,518,528		13,518,528
	W	21,530,794	40,	060,734	595,171	323,464,377	156,337	385,807,413
		Financial liabil at FVTPI			al liabilities at ortized cost	Derivatives held for hedgi		Total
Liabilities								
Deposits Financial liabilities at	W		-		287,615,269		-	287,615,269
FVTPL		50	8,081		-		-	508,081
Derivative liabilities		1,68	3,753		-	210),079	1,893,832
Borrowings Debt securities			-		17,325,884		-	17,325,884
issued Other financial			-		38,029,868		-	38,029,868
liabilities					20,633,175		<u> </u>	20,633,175
	W	2,19	1,834		363,604,196	210),079	366,006,109

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(d) Classification by category of financial instruments (continued)

	_	December 31, 2018								
	_	Financial assets at FVTPL	Finance assets FVO	at	Financial assets designated at FVOCI	Financial assets at amortized cost	Derivatives held for hedging	Total		
Assets										
Due from banks Securities at	₩	-		-	-	10,581,364	-	10,581,364		
FVTPL		15,612,433		-	-	-	-	15,612,433		
Derivative assets		1,443,371		-	-	-	41,087	1,484,458		
Loans at FVTPL Loans at amortized		645,237		-	-	-	-	645,237		
cost Securities at		-		-	-	251,233,806	-	251,233,806		
FVOCI Securities at		-	31,43	5,546	442,802	-	-	31,878,348		
amortized cost Other financial		-		-	-	16,824,400	-	16,824,400		
assets		_		_	-	14,200,801	-	14,200,801		
	W	17,701,041	31,43	5,546	442,802	292,840,371	41,087	342,460,847		
		Financial liabil FVTPL	ities at		ncial liabilities a nortized cost	t Derivati		Total		
Liabilities										
Deposits Financial liabilities	₩		-		257,892,72	24	-	257,892,724		
at FVTPL		4′	79,559			-	-	479,559		
Derivative liabilities		1,29	98,632			-	472,953	1,771,585		
Borrowings Debt securities			-		16,154,82	21	-	16,154,821		
issued Other financial			-		31,899,26	56	-	31,899,266		
liabilities			<u> </u>		15,460,07	75		15,460,075		
	W	1,77	78,191		321,406,88	36	472,953	323,658,030		

There were no financial assets and financial liabilities that were reclassified between financial instruments during the years ended December 31, 2019 and 2018.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-4. Measurement of fair value (continued)

(e) Financial instruments income and costs by category for the years ended December 31, 2019 and 2018 were as follows:

	_			December 3	1, 2019		
	-		Fees and	Reversal of			_
		Interest	commission	(provision for)			Other
		income	income	credit loss			comprehensive
	-	(expense)	(expense)	allowance	Others	Total	income (loss)
Securities at FVTPL	W	290,274	10,327	-	223,630	524,231	-
Securities at FVOCI		716,463	-	(4,113)	129,410	841,760	157,663
Securities at amortized cos	t	466,706	-	(578)	_	466,128	-
Loans at FVTPL		16,254	-	-	13,213	29,467	-
Loans at amortized cost		8,972,855	80,341	(367,969)	(13,750)	8,671,477	-
Other financial assets		192,180	150,372	(1,556)	-	340,996	-
Financial liabilities at			(50)			(50)	
FVTPL Financial liabilities at		-	(52)	-	-	(52)	-
amortized cost		(4,782,945)	(76)	_	(380,429)	(5,163,450)	(47,755)
Net derivatives held for		(1,702,510)	(, 0)		(000, 12)	(0,100,.00)	(.7,700)
hedging		-	-	-	374,794	374,794	(1,708)
Allowance for off balance				(2.652)		(2.652)	
sheet items	-	<u>-</u>		(2,652)	 .	(2,652)	
	W	5,871,787	240,912	(376,868)	346,868	6,082,699	108,200
				D 1 0	1 2010		
	-		Г 1	December 3 Reversal of	1, 2018		
		Intonat	Fees and commission	(provision for)			Other
		Interest income	income	credit loss			comprehensive
		(expense)	(expense)	allowance	Others	Total	income (loss)
Securities at FVTPL	₩	221,569	10,403		348,809	580,781	
Securities at FVOCI	**	607,771	10,403	(8,395)	27,264	626,640	165,538
Securities at amortized cos	f	403,707	-	1,122	27,204	404,829	105,556
Loans at FVTPL		12,462	-	1,122	13,827	26,289	-
Loans at amortized cost		8,184,956	73,870	(245,113)	25,999	8,039,712	-
Other financial assets		166,259	113,306	1,400	23,999	280,965	-
Financial liabilities at		100,239	113,300	1,400	-	280,903	-
FVTPL		-	(18)	_	-	(18)	-
Financial liabilities at			, ,				
amortized cost		(4,010,730)	(126)	-	(75,693)	(4,086,549)	(36,383)
Net derivatives held for hedging		_	_	_	75,757	75,757	505
Allowance for off balance		_	_	_	13,131	13,131	303
sheet items				7,847		7,847	
	W	5,585,994	197,435	(243,139)	415,963	5,956,253	129,660
		0,000,,,	177,133	(= 10 , 10)	110,000	-,,,	127,000

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

3. Financial risk management (continued)

3-5. Capital risk management

Capital regulations applicable to banks were adopted in 1988, which focused primarily on capital adequacy and asset soundness as a measure of risk. Building upon the initial Basel Capital Accord of 1988, capital regulations were developed to reflect additional risks as well. For the purpose of improving risk management and increasing capital adequacy of banks, capital adequacy standards based on the new Basel Capital Accord (Basel III) was implemented by the Financial Services Commission regulations beginning on December 1, 2013. Under these regulations, all domestic banks including the Group are required to maintain a capital adequacy ratio of 8% or above and report whether the Group meet the capital adequacy ratio to the Financial Services Commission.

Under the Banking Act, the capital of a bank is divided into two categories.

- (a) Tier 1 capital (Common equity Tier 1 capital + Additional Tier 1 capital)
 - i) Common equity Tier 1 capital: Common equity Tier 1 capital consists of capital stock, capital surplus, retained earnings (excluding regulatory reserve for loan loss), accumulated other comprehensive income, other disclosed reserves, and non-controlling interests that meet certain criteria.
 - ii) Additional Tier 1 capital: Additional Tier 1 capital consists of equity instrument that meet certain criteria for perpetual nature of the equity instrument, any related capital surplus, instruments issued by consolidated subsidiaries of the Bank and held by third parties that meet certain criteria.

(b) Tier 2 capital (Supplementary capital)

Tier 2 capital consists of instruments that meet certain criteria for loss absorption in case of liquidation, any related capital surplus, and instruments issued by consolidated subsidiaries of the Bank and held by third parties that meet certain criteria.

The capital adequacy ratio of the Group is calculated by ratios of Tier 1 and Tier 2 capital (less any capital deductions) to risk-weighted assets. Pursuant to Basel III, operational risk, such as inadequate procedures, loss risk by employees, internal systems, occurrence of unexpected events, as well as credit risk, market risk and additional risk are taken into account in calculating the risk-weighted assets.

The Group evaluates and manages the capital adequacy ratio pursuant to internally developed standards. It means that the Group assesses whether the level on ratio of available capital to economic capital is sufficient, or not. The Group manages the economic adequacy by the amount of each risk type including credit, market, operation, interest rate, liquidity, concentration, and foreign currency settlement risk, as well as the total amounts of all of those risk types.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-5. Capital risk management (continued)

Details of capital categories and the capital adequacy ratio of the Group as of December 31, 2019 and 2018 were as follows:

Category	<u></u>	December 31, 2019	December 31, 2018	
Capital:				
Common equity Tier 1 capital	₩	23,159,278	22,113,697	
Additional Tier 1 capital		997,987	698,660	
Tier 1 capital	_	24,157,265	22,812,357	
Tier 2 capital		4,747,850	4,687,083	
	₩ _	28,905,115	27,499,440	
Risk-weighted assets:				
Credit risk-weighted assets (*1)	W	163,937,574	154,994,030	
Market risk-weighted assets		7,663,130	7,227,874	
Operating risk-weighted assets		10,036,197	9,371,300	
	w _	181,636,901	171,593,204	
Capital adequacy ratio:				
Common equity Tier 1 capital ratio		12.75%	12.89%	
Tier 1 capital ratio		13.30%	13.29%	
Tier 2 capital ratio		2.61%	2.73%	
Total capital ratio	_	15.91%	16.03%	

^(*1) The additional risk weighted assets resulting from the insufficient capital under capital floor is included in credit risk-weighted assets.

Pursuant to related regulations, the Group shall maintain the total capital ratio at 8.0% or above, Tier 1 capital ratio at 6.0% or above and common equity capital ratio at 4.5% or above. In 2016, the minimum regulatory BIS capital requirement to be met by 2019 was raised to 14% due to the enforcement of Basel III capital regulations. This is due to the additions of capital conservation buffer (2.5%p), additional capital buffer for Domestic Systemically Important Bank ("D-SIB") (1.0%p) and countercyclical capital buffer (2.5%p) to the existing minimum capital ratio. Capital conservation buffer and additional capital buffer for D-SIB will be adjusted upwards by 25%p per year through 2019 based on transitional arrangements. The addition of countercyclical capital buffer can be used up to a maximum of the buffer rate of 2.5%p in a period of excess aggregate credit growth. The minimum regulatory BIS capital ratio to be complied with as of the end of 2019 is 11.5%, which is due to the increases of 2.5%p for capital conservation buffer, 1.0%p for additional capital buffer for D-SIB, and 0%p for countercyclical capital buffer, respectively.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-6. Transaction as a transfer of financial instrument

- (a) Transfers financial assets that were not derecognized
 - i) Bonds sold under repurchase agreements at a fixed price as of December 31, 2019 and 2018 were as follows:

	_	December 31, 2019	December 31, 2018
Transferred assets: Securities at FVOCI	W	124.801	50,289
Securities at amortized cost	_	126,144	156,066
	W	250,945	206,355
Associated liabilities:	_	_	_
Bonds sold under repurchase agreements	W	103,489	83,028

ii) When the Group's securities are transferred, the Group transfers the ownership of the securities, but upon the termination, the Group will have to return the securities. As a result, securities loaned as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018	Lender
Securities at FVOCI:				
Government bonds	₩	1,115,115	595,149	Korea Securities Finance Corp., Korea Securities Depository Korea Securities Finance Corp.,
Financial institutions bonds		349,987	319,770	Korea Securities Depository
Securities at amortized cost:				
Government bonds		114,969	40,149	Korea Securities Finance Corp., Korea Securities Depository Korea Securities Finance Corp.,
Financial institutions bonds		110,065	90,060	Korea Securities Depository
	W	1,690,136	1,045,128	

⁽b) Financial instruments that were qualified for derecognition but under continuing involvement.

There are no financial instrument that meets the conditions of derecognition and in which the Group has continuing involvement as of December 31, 2019 and 2018.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-7. Offsetting financial assets and financial liabilities

Details of financial assets and financial liabilities subject to offsetting, enforceable master netting agreements and similar agreements as of December 31, 2019 and 2018 were as follows:

December 21 2010

	_			December 3	1, 2019		
		Gross	Gross amounts of recognized financial assets and	Net amounts of financial assets and liabilities	Related amoun in the state financial p		
	<u>-</u>	amounts of recognized financial assets and liabilities	liabilities set off in the statement of financial position	presented in the statement of financial position	Financial instruments	Cash collateral received	Net amount
Financial assets							
Derivative assets (*1)	W	2,092,001	-	2,092,001	7,857,555	11,252	1,358,251
Other financial assets (*1) Bonds sold under repurchase agreements related collateral		7,135,057	-	7,135,057	1,031,333	11,232	1,338,231
of securities (*2) Bonds purchased under resale		250,945	-	250,945	103,489	-	147,456
agreement (Loans) (*2)		1,771,033	-	1,771,033	1,770,855	-	178
Securities lent (*2) Domestic exchange		1,690,136	-	1,690,136	1,690,136	-	-
settlements receivables (*3) Receivable from disposal of		31,027,416	26,820,045	4,207,371	-	-	4,207,371
securities, etc. (*4)	-	25,807	1,133	24,674			24,674
	W	43,992,395	26,821,178	17,171,217	11,422,035	11,252	5,737,930
Financial liabilities							
Derivative liabilities (*1)	W	1,846,579	-	1,846,579	7,630,938	_	341,924
Other financial liabilities (*1) Bonds sold under repurchase		6,126,283	-	6,126,283	7,030,738		341,724
agreements (Borrowings) (*2)		103,489	-	103,489	103,489	-	-
Securities sold Domestic exchange		40,321	-	40,321	40,321	-	-
settlement payables (*3) Payable from purchase of		28,150,544	26,820,045	1,330,499	1,330,499	-	-
securities, etc. (*4)		1,606	1,133	473	473		
	W	36,268,822	26,821,178	9,447,644	9,105,720		341,924

^(*1) The Group has certain derivative transactions subject to the ISDA (International Swaps and Derivatives Association) agreement. According to the ISDA agreement, when credit events (e.g. default) of counterparties occur, the net amount after offsetting the amounts obligated by each party is settled.

^(*2) Resale and repurchase agreement, securities borrowing and lending agreement are also similar to ISDA agreement with respect to enforceable netting agreements.

^(*3) The Group has legally enforceable right to set off and settles financial assets and liabilities on a net basis. Therefore, domestic exchanges settlement receivables (payables) are recorded on a net basis in the consolidated statements of financial position.

^(*4) Receivables and payables related to settlement of purchase and disposition of enlisted securities are offset and the net amount is presented in the consolidated statement of financial position because the Group currently has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis. The effect of offsetting due to the establishment of 'Central Counter Party ("CCP")' system is included in the amount.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

3. Financial risk management (continued)

3-7. Offsetting financial assets and financial liabilities (continued)

	_			December 3	1, 2018			
	_	Gross	Gross amounts of recognized financial assets and	amounts of Net amounts recognized of financial assets and liabilities	in the state	Related amounts not set off in the statement of financial position		
	<u>-</u>	amounts of recognized financial assets and liabilities	liabilities set off in the statement of financial position	presented in the statement of financial position	Financial instruments	Cash collateral received	Net amount	
Financial assets								
Derivative assets (*1)	₩	1,481,678	-	1,481,678	6,594,662	7,396	957,276	
Other financial assets (*1) Bonds sold under repurchase agreements related collateral		6,077,656	-	6,077,656	0,374,002	7,370	731,210	
of securities (*2)		206,356	-	206,356	83,028	-	123,328	
Bonds purchased under resale agreement (Loans) (*2)		4,720,281	-	4,720,281	4,720,281	-	_	
Securities lent (*2)		1,045,128	-	1,045,128	1,045,128	-	-	
Domestic exchange settlements receivables (*3) Receivable from disposal of		32,337,320	26,344,937	5,992,383	-	-	5,992,383	
securities, etc. (*4)	_	22,906	519	22,387			22,387	
	W	45,891,325	26,345,456	19,545,869	12,443,099	7,396	7,095,374	
Financial liabilities								
Derivative liabilities (*1)	W	1,757,177	-	1,757,177	6,795,260	_	280,055	
Other financial liabilities (*1) Bonds sold under repurchase		5,318,138	-	5,318,138	0,773,200		200,033	
agreements (Borrowings) (*2)		83,028	-	83,028	83,028	-	-	
Securities sold Domestic exchange		20,625	-	20,625	20,625	-	-	
settlement payables (*3) Payable from purchase of		27,361,193	26,344,937	1,016,256	1,016,256	-	-	
securities, etc. (*4)	_	552	519	33	33			
	W	34,540,713	26,345,456	8,195,257	7,915,202		280,055	

^(*1) The Group has certain derivative transactions subject to the ISDA (International Swaps and Derivatives Association) agreement. According to the ISDA agreement, when credit events (e.g. default) of counterparties occur, the net amount after offsetting the amounts obligated by each party is settled.

^(*2) Resale and repurchase agreement, securities borrowing and lending agreement are also similar to ISDA agreement with respect to enforceable netting agreements.

^(*3) The Group has legally enforceable right to set off and settles financial assets and liabilities on a net basis. Therefore, domestic exchanges settlement receivables (payables) are recorded on a net basis in the consolidated statements of financial position.

^(*4) Receivables and payables related to settlement of purchase and disposition of enlisted securities are offset and the net amount is presented in the consolidated statement of financial position because the Group currently has a legally enforceable right to set off the recognized amounts and intends to settle on a net basis. The effect of offsetting due to the establishment of 'Central Counter Party ("CCP")' system is included in the amount.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

4. Significant estimates and judgments

The preparation of consolidated financial statements requires the application of certain critical estimates and judgments relative to the future. Management's estimated outcomes may differ from actual outcomes. The change in an accounting estimate is recognized prospectively in profit or loss in the period of the change, if the change affects that period only, or the period of the change and future periods, if the change affects both.

(a) Income taxes

The Group is subject to tax laws from various countries. In the normal course of business, there are various types of transactions and different accounting methods that may add uncertainties to the decision of the final income taxes. The Group has recognized current and deferred taxes that reflect tax consequences based on the best estimates in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities. However, actual income taxes in the future may not be identical to the recognized deferred tax assets and liabilities, and this difference can affect current and deferred tax at the period when the final tax effect is determined.

(b) Fair value of financial instruments

The fair values of financial instruments which are not actively traded in the market are determined by using valuation techniques. The Group determines valuation techniques and assumptions based on significant market conditions at the end of each reporting period. Diverse valuation techniques are used to determine the fair value of financial instruments, from generic valuation techniques to internally developed valuation models that incorporate various types of assumptions and variables.

(c) Allowances for loan losses, guarantees and unused loan commitments

The Group determines and recognizes allowances for losses on debt securities, loans and other receivables measured at amortized cost or FVOCI, and recognizes provisions for guarantees and unused loan commitments through impairment testing. The accuracy of allowances for credit losses is determined by the estimation of expected cash flows for individually assessed allowances, and methodology and assumptions used for collectively assessed allowances and provisions for groups of loans, guarantees and unused loan commitments.

(d) Defined benefit obligation

The present value of a defined benefit obligation that is measured by actuarial valuation methods uses various assumptions which can change according to various elements. The rate used to discount post-employment benefit obligations is determined by reference to market yields at the end of the reporting period on high quality corporate bonds. The currency and term of the corporate bonds are consistent with the currency and estimated term of the post-employment benefit obligations. Actuarial gains and losses including experience adjustments and the effects of changes in actuarial assumptions are recognized in other comprehensive income. Other significant assumptions related to defined benefit obligations are based on current market situations.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

5. Operating segments

(a) The general descriptions of the Group's operating segments as of December 31, 2019 and 2018 were as follows:

The Group has four reportable segments which are strategic business units. Each of these segments is providing different services and managed separately.

Description	Area of business
Retail banking	Loans to or deposits from individual customers, wealth management customers, and institutions such as hospitals, airports and schools.
Corporate banking	Loans to or deposits from corporations, including small or medium sized companies and businesses related to investment banking.
International group	Supervision of overseas subsidiaries and branch operations and other international businesses.
Others	Treasury management, trading of securities and derivatives, administration of bank operations and merchant banking account.

(b) The following table provides information of financial performance of each reportable operating segment for the years ended December 31, 2019 and 2018.

				201	9		
		Retail banking (*1)	Corporate banking (*1)	International group	Others	Consolidation adjustments	Total
Net interest income Net fees and commission	W	2,501,567	2,353,385	746,410	266,808	3,617	5,871,787
income (expense)		446,629	495,103	102,046	80,285	(6,671)	1,117,392
Net other expense (*2)		(1,773,404)	(774,315)	(375,411)	(801,276)	(1,470)	(3,725,876)
Operating income (expense)		1,174,792	2,074,173	473,045	(454,183)	(4,524)	3,263,303
Net non-operating income (expenses) (*3)		(203,064)	(19,215)	(3,368)	41,470	(1,453)	(185,630)
Share of loss of associates		-	-	-	-	(763)	(763)
Profit (loss) before income tax		971,728	2,054,958	469,677	(412,713)	(6,740)	3,076,910
Income tax expense (benefit)		(239,654)	(506,920)	(104,240)	100,605	2,567	(747,642)
Profit (loss) for the year	₩	732,074	1,548,038	365,437	(312,108)	(4,173)	2,329,268
Attributable to:			_		_		
Equity holder of the Bank	W	732,074	1,548,038	365,437	(312,108)	(4,249)	2,329,192
Non-controlling interests		-	-	-	-	76	76

^(*1) SOHO segment was reclassified from retail banking to corporate banking during the year

^(*2) Effects of hedging on net investments in foreign operations were included.

^(*3) Net non-operating income (expenses) of the retail banking segment included \text{\text{\$\psi}}151,523 million in impairment losses for intangible assets recognized in relation to the right to be the depository bank of municipal and provincial governments.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

5. Operating segments (continued)

(b) The following table provides information of financial performance of each reportable operating segment for the years ended December 31, 2019 and 2018. (continued)

	2018							
		Retail Banking (*1)	Corporate Banking (*1)	International group	Others	Consolidation adjustments	Total	
Net interest income Net fees and commission	₩	2,508,207	2,281,861	629,038	163,899	2,989	5,585,994	
income (expense)		447,306	452,225	99,272	43,258	(5,528)	1,036,533	
Net other expense (*2)		(1,995,823)	(821,730)	(289,296)	(349,919)	(1,073)	(3,457,841)	
Operating income (expense)		959,690	1,912,356	439,014	(142,762)	(3,612)	3,164,686	
Net non-operating income (expenses)		(36,465)	(30,214)	(1,871)	120,301	(69,056)	(17,305)	
Share of loss of associates		(30,103)	(30,211)	(1,0/1)	-	(977)	(977)	
Profit (loss) before income tax		923,225	1,882,142	437,143	(22,461)	(73,645)	3,146,404	
Income tax expense		(247,181)	(503,983)	(108,572)	2,688)	(9,994)	(867,042)	
Profit (loss) for the year	₩	676,044	1,378,159	328,571	(19,773)	(83,639)	2,279,362	
Attributable to:								
Equity holder of the Bank	W	676,044	1,378,159	328,571	(19,773)	(83,952)	2,279,049	
Non-controlling interests		-	-	-	-	313	313	

^(*1) The information was recasted because the composition of reportable segment changed during the year ended December 31, 2019.

^(*2) Effects of hedging on net investments in foreign operations were included.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

5. Operating segments (continued)

(c) The following table provides information of net interest income of each reportable operating segment from external consumers and net interest income (expenses) between operating segments for the years ended December 31, 2019 and 2018.

		2019							
		Retail Banking (*1)	Corporate Banking (*1)	International group	Others	Consolidation adjustments	Total		
Net interest income of each operating segment from									
external consumers Net interest income (expenses)	₩)	2,176,265	2,778,207	802,205	115,110	-	5,871,787		
between operating segments		325,302	(424,822)	(55,795)	151,698	3,617	<u>-</u>		
	₩	2,501,567	2,353,385	746,410	266,808	3,617	5,871,787		

(*1) SOHO segment was reclassified from retail banking to corporate banking during the year.

		2018						
		Retail Banking (*1)	Corporate Banking (*1)	International group	Others	Consolidation adjustments	Total	
Net interest income of each operating segment from external consumers	W	2,794,262	1,819,726	688,540	283,466	_	5,585,994	
Net interest income (expenses) between operating segments		(286,055) 2,508,207	462,135 2,281,861	(59,502) 629,038	(119,567) 163,899	2,989 2,989	5,585,994	

^(*1) It was restated as the composition of reportable segment changed during the year ended December 31, 2019.

(d) Financial information of geographical area

i) The following table provides information of operating income from external consumers by geographical area for the years ended December 31, 2019 and 2018.

	_	Operating revenue		Operating	expenses	Operating income		
	_	2019	2018	2019	2018	2019	2018	
Domestic	W	21,133,315	18,024,769	18,537,923	15,327,172	2,595,392	2,697,597	
Overseas	_	2,012,161	1,706,942	1,344,250	1,239,853	667,911	467,089	
	W	23,145,476	19,731,711	19,882,173	16,567,025	3,263,303	3,164,686	

ii) The following table provides information of non-current assets by geographical area as of December 31, 2019 and 2018.

		December 31, 2019	December 31, 2018
Domestic	₩	3,459,556	2,713,113
Overseas		297,602	188,821
	₩	3,757,158	2,901,934

Non-current assets as of December 31, 2019 and 2018 include property and equipment, intangible assets and investment properties.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

6. Cash and due from banks

(a) Cash and due from banks as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Cash	\mathbf{w}	2,528,135	2,568,913
Deposits in Korean won:			
Reserve deposits		13,555,978	2,094,612
Others		38,454	663,371
		13,594,432	2,757,983
Deposits in foreign currencies:			
Deposits		5,607,614	5,030,664
Time deposits		2,214,820	2,585,510
Others		116,674	221,992
	_	7,939,108	7,838,166
Allowance for impairment		(11,843)	(14,785)
	W	24,049,832	13,150,277

(b) Restricted due from banks as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Deposits in Korean won:	_		
Reserve deposits	W	13,555,978	2,094,612
Others		250	620,308
	_	13,556,228	2,714,920
Deposits in foreign currencies:	_		
Deposits		1,138,029	1,150,767
Time deposits		34,329	30,748
Others		8,989	6,494
	_	1,181,347	1,188,009
	₩ _	14,737,575	3,902,929

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

7. Securities at fair value through profit or loss

Securities at FVTPL as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Debt securities:		_	_
Government bonds	₩	1,083,634	776,979
Financial institution bonds		3,992,007	2,506,260
Corporate bonds		2,718,286	1,689,256
Bills bought		3,121,398	4,195,776
CMA		3,723,401	3,001,831
Beneficiary certificates		2,701,285	2,347,090
Others		1,151,105	817,039
		18,491,116	15,334,231
Equity securities:			
Stocks		113,316	123,321
Other:			
Gold/silver deposits		111,715	154,881
- -	W	18,716,147	15,612,433

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

8. <u>Derivatives</u>

(a) The notional amounts of derivatives as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Foreign currency related			
Over the counter:			
Currency forwards	W	119,660,724	126,084,358
Currency swaps	••	38,592,870	31,103,735
Currency options		2,743,171	1,942,878
continuely options		160,996,765	159,130,971
Exchange traded:		100,550,700	103,100,37,1
Currency futures		34,734	33,543
,		161,031,499	159,164,514
Interest rates related			
Over the counter:			
Interest rate swaps		34,119,636	28,827,452
Interest rate options		80,000	
ı		34,199,636	28,827,452
Exchange traded:		- 1,-22,000	_==,==-, .==
Interest rate futures		292,063	294,777
Interest rate swaps (*1)		41,330,340	35,183,073
1 (/		41,622,403	35,477,850
		75,822,039	64,305,302
Equity related			, , ,
Over the counter:			
Equity options		276,441	344,550
Exchange traded:			
Equity futures		14,926	29,514
Equity options		58,863	52,063
		73,789	81,577
		350,230	426,127
Commodity related			
Over the counter:			
Commodity forwards		175,453	157,416
Hedge			
Fair value hedge:			
Interest rate swaps		9,371,632	9,377,731
Net investment hedge:			
Currency forwards		231,560	223,620
		9,603,192	9,601,351
	₩	246,982,413	233,654,710

^(*1) Notional amount of derivatives which is settled in the 'Central Counter Party ("CCP")' system.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

8. <u>Derivatives (continued)</u>

(b) Fair values of derivative instruments as of December 31, 2019 and 2018 were as follows:

		December 31, 2019		December 31, 2018	
		Assets	Liabilities	Assets	Liabilities
Foreign currency related					
Over the counter:					
Currency forwards	W	1,231,611	949,731	847,778	778,233
Currency swaps		467,172	516,580	394,428	373,512
Currency options		8,870	9,430	7,651	12,273
		1,707,653	1,475,741	1,249,857	1,164,018
Interest rates related					
Over the counter:					
Interest rate swaps		229,277	202,311	191,343	133,152
Interest rate options		835	-	_	-
· ·		230,112	202,311	191,343	133,152
Equity related					
Over the counter:					
Equity options		2,804	5,504	145	509
		2,804	5,504	145	509
Exchange traded:					
Equity options		-	197	-	953
		2,804	5,701	145	1,462
Commodity related					
Over the counter:					
Commodity forwards		5,089		2,026	
Hedge					
Fair value hedge:					
Interest rate swaps		154,585	210,079	35,093	467,381
Net investment hedge:		- ,	- ,- ,-	,	, ,
Currency forwards		1,750	-	5,994	5,572
-		156,335	210,079	41,087	472,953
	W	2,101,993	1,893,832	1,484,458	1,771,585

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

8. <u>Derivatives (continued)</u>

(c) Gain or loss on valuation of derivatives for the years ended December 31, 2019 and 2018 were as follows:

	2019		2018		
	Gain	Loss	Gain	Loss	
Foreign currency related				_	
Over the counter:					
Currency forwards \\	1,111,857	957,739	878,840	808,621	
Currency swaps	475,909	499,295	454,604	490,414	
Currency options	9,409	5,529	10,999	2,760	
	1,597,175	1,462,563	1,344,443	1,301,795	
Interest rates related			_	_	
Over the counter:					
Interest rate swaps	146,274	161,983	139,748	62,881	
Interest rate options	299	-	-	-	
	146,573	161,983	139,748	62,881	
Exchange traded:					
Interest rate futures	550	-	-	-	
	147,123	161,983	139,748	62,881	
Equity related				_	
Over the counter:					
Equity options	3,001	2,919	6,234	4,056	
Exchange traded:	,	,		ŕ	
Equity options	313	-	24	152	
	3,314	2,919	6,258	4,208	
Commodity related					
Over the counter:					
Commodity forwards	5,089	<u> </u>	2,026		
Hedge					
Fair value hedge:					
Interest rate swaps	338,168	23,402	142,154	86,909	
Net investment hedge:	220,100	25,.02	1.2,10.	00,505	
Currency forwards	-	1,649	-	2,483	
·	338,168	25,051	142,154	89,392	
Ψ	2,090,869	1,652,516	1,634,629	1,458,276	

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

8. Derivatives (continued)

- (d) Hedge accounting
- i) Purpose of risk hedge and strategy

The Group transacts with derivative financial instruments to hedge its interest rate risk and currency risk arising from the assets and liabilities of the Group. The Group applies fair value hedge accounting that uses interest rate swaps to hedge fair value movements risk arising from changes in the market interest rates of the Korean won structured notes, foreign currency issued financial debentures, structured deposits in foreign currencies, foreign currency structured deposits and foreign currency investment receivables. In order to hedge the foreign exchange risk of the net investment from the overseas, the Group applies the net investment hedge accounting for foreign operations using non-derivative financial instruments.

ii) Nominal amounts and average hedge ratios for hedging instruments as of December 31, 2019 and 2018 were as follows:

				Dece	ember 31, 20	19		
		1 year	1 year ~ 2 years	2 years ~ 3 years	3 years ~ 4 years	4 years ~ 5 years	More than	Т-4-1
Fair color hadaan	_	or less	or less	or less	or less	or less	5 years	Total
Fair value hedges: Interest rate swaps Average hedge ratio	₩	700,469 100%	704,985 100%	667,948 100%	608,424 100%	575,481 100%	6,114,325 100%	9,371,632 100%
Hedge of net investments								
in foreign operations:								
Currency forwards	W	231,560	_	_	-	_	_	231,560
Borrowings in foreign currencies		21,269	-	-	-	-	-	21,269
Debt securities issued								
in foreign currencies		230,773	32,414	554,757	281,345	62,277		1,161,566
	W	483,602	32,414	554,757	281,345	62,277		1,414,395
Average hedge ratio		100%	100%	100%	100%	100%		100%
				Dece	ember 31, 20	18		
			1 year ~	2 years ~	3 years ~	4 years ~		
		1 year or less	2 years or less	3 years or less	4 years or less	5 years or less	More than 5 years	Total
Fair value hedges:	_							
Interest rate swaps Average hedge ratio	₩	110,000 100%	687,632 100%	723,177 100%	657,254 100%	715,584 100%	6,484,084 100%	9,377,731 100%
Hedge of net investments								
in foreign operations:								
Currency forwards	W	223,620	-	-	-	-	-	223,620
Borrowings in foreign currencies		73,789	20,264	-	-	-	-	94,053
Debt securities issued								
in foreign currencies	_	40,933	219,860	31,512	534,588	271,698		1,098,591
	***	220 242	240 124	21 512	524 500	271 (00		1 41 () (4
	W	338,342	240,124 100%	31,512 100%	534,588	271,698 100%		1,416,264

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

8. <u>Derivatives (continued)</u>

- (e) Impact of hedge accounting on the consolidated financial statements
 - i) Impact on hedging instruments in the consolidated statement of financial position as of December 31, 2019 and 2018 and consolidated statement of comprehensive income and consolidated statement of changes in equity for the year then ended were as follow:

						December 31, 201	9		
				idated statem ancial positio		Consolidated statement of comprehensive income			Reserve
	Hedging instruments		Securities at FVOCI	Deposits	Debt securities issued	Other comprehensive income for the year	Accumulated fair value hedges adjustment	Changes in fair value for the year	exchange differences on translation
Fair value hedges:	morraments		1 1 0 0 1	Беровия	155404	year	adjustment	101 the year	translation
Interest rate risk	Debt securities issued Investment bonds	W	432,172	-	7,072,596	-	46,201 6,745	(250,446) 1,399	-
	Time deposits		- 432,172	1,786,425	-	-	(102,493)	,	-
Hedge of net investments in foreign operations:	•			, ,			, , ,	, , ,	
operations.	Net								
Foreign exchange	investments								
risk	in foreign operations		_	_	_	49,463	_	49,463	(88,953)
	operations	W	432,172	1,786,425	7,072,596	49,463	(49,547)	(259,000)	(88,953)
				idated statem		December 31, 201 Consolidated statement of comprehensive income	8		Reserve of
			G :::		D 1:	Other	Accumulated	CI.	exchange
	Hedging		Securities at		Debt securities	comprehensive income for the	fair value hedges	Changes in fair value	differences on
	instruments		FVOCI	Deposits	issued	year	adjustment	for the year	translation
Fair value hedges:									
Interest rate risk	Debt securities issued Investment	W	-	-	7,058,950	-	(357,232)	, , ,	-
	bonds Time deposits		293,215	1,814,109	-	-	(2,832) (167,226)		-
Hedge of net investments in foreign	Time deposits		-	1,614,109	-	-	(107,220)	(9,490)	-
operations:									
Foreign exchange risk	Net investments in foreign								
	operations	W	293,215	1,814,109	7,058,950	35,879 35,879	(527,290)	(35,879) (92,341)	138,416 138,416

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

8. <u>Derivatives (continued)</u>

- (e) Impact of hedge accounting on the consolidated financial statements (continued)
 - ii) Impact on hedged items in the consolidated statement of financial position as of December 31, 2019 and 2018 and consolidated statement of comprehensive income and consolidated statement of changes in equity for the year then ended were as follow:

						December 31	, 2019		
		_				ed statement of al position		Consolidated statement of comprehensive income	
		_	Notional amounts	Derivative assets	Derivative liabilities	Borrowings	Debt securities issued	Other comprehensive loss for the period	Changes in fair value for the period
Fair value he Interest rate risk	dges: Interest rate swaps	W	9,371,632	154,585	210,079	-	-	-	314,766
Hedge of net foreign ope	investments in rations:								
Foreign exchange	Currency forwards Borrowings in foreign		231,560	1,751	-	-	-	(1,709)	(4,036)
risk	currencies Debt securities issued		21,269	-	-	21,269	-	(5,725)	(5,725)
	in foreign currencies	_	1,161,566				1,156,628	(42,029)	(42,029)
		W	10,786,027	156,336	210,079	21,269	1,156,628	(49,463)	262,976
		_				December 31	, 2018	Consolidated	
						ed statement of al position		statement of comprehensive income	
		_	Notional amounts	Derivative assets	Derivative liabilities	Borrowings	Debt securities issued	Other comprehensive loss for the period	Changes in fair value for the period
Fair value he	dges:								
Interest rate risk	Interest rate swaps	W	9,377,731	35,093	467,381	-	-	-	55,245
Hedge of net foreign ope	investments in rations:								
Foreign exchange	Currency forwards		223,620	5,994	5,572	-	-	505	(3,260)
risk	Borrowings in foreign currencies		94,053	-	-	94,053	-	(7,401)	(7,401)
	Debt securities issued in foreign currencies	=	1,098,591				1,092,739	(28,983)	(28,983)
		W	10,793,995	41,087	472,953	94,053	1,092,739	(35,879)	15,601

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

8. <u>Derivatives (continued)</u>

- (e) Impact of hedge accounting on the consolidated financial statements (continued)
 - iii) Gains (losses) on fair value hedged items and hedging instruments attributable to the hedged risk for the years ended December 31, 2019 and 2018 were as follows:

			December 31, 2019	
		Losses on fair value hedges (hedged items)	Gains on fair value hedges (hedging instruments)	Hedge ineffectiveness recognized in profit or loss (*1)
Fair value hedges: Interest rate swaps	W	(370,787)	377,121	6,334
Hedge of net investments in foreign operations:		40.462	(51.700)	(2.227)
Foreign exchange risk	_	49,463	(51,790)	(2,327)
	W	(321,324)	325,331	4,007

(*1) Recognized hedge ineffectiveness is included in other operating income and expenses in the consolidated statement of comprehensive income.

			December 31, 2018	
		Losses on fair value hedges (hedged items)	Gains on fair value hedges (hedging instruments)	Hedge ineffectiveness recognized in profit or loss (*1)
Fair value hedges: Interest rate swaps	₩	(76,573)	79,635	3,062
Hedge of net investments in foreign operations:			(0.000)	0.760
Foreign exchange risk	_	35,879	(39,644)	(3,765)
	₩_	(40,694)	39,991	(703)

^(*1) Recognized hedge ineffectiveness is included in other operating income and expenses in the consolidated statement of comprehensive income.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

9. Loans

(a) Details of loans as of December 31, 2019 and 2018 were as follows:

		December 3	1, 2019
	_	Loans at amortized cost	Loans at FVTPL
Household loans	W	123,219,603	_
Corporate loans		139,966,542	868,991
Public and other loans		3,189,534	-
Loans to banks		2,672,514	-
Credit card receivables		153,436	-
	_	269,201,629	868,991
Deferred loan origination costs and fees		497,804	-
	_	269,699,433	868,991
Less: Allowance for impairment		(1,527,169)	-
	W	268,172,264	868,991

	_	December 3	1, 2018
		Loans at amortized cost	Loans at FVTPL
Household loans	W	112,594,439	-
Corporate loans		133,399,567	645,237
Public and other loans		2,729,075	-
Loans to banks		3,586,594	-
Credit card receivables		103,580	-
	_	252,413,255	645,237
Deferred loan origination costs and fees		496,263	-
	_	252,909,518	645,237
Less: Allowance for impairment		(1,675,712)	_
•	W	251,233,806	645,237

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

- (b) Changes in allowance for impairment and book value
- i) Changes in allowance for impairment for the years ended December 31, 2019 and 2018 were as follows:

December 31, 2019

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$												_						
Stage 1 Stage 2 Stage 3 Stage 4 Stage 4 Stage 5 Stage 6 Stag										Loans								
Beginning balance W 14,445 340 - 94,194 79,954 131,141 371,157 523,180 444,837 14,162 6,348 10,739 22,656 2,175 781 1,716,109 cxpected credit losses 241 (241) - 16,830 (16,499) (331) 44,905 (43,205) (1,700) 805 (802) (3) 160 (158) (2) - Transfer to lifetime expected credit losses (19) 19 - (8,516) 16,266 (7,750) (32,494) 114,871 (82,377) (202) 332 (130) (98) 103 (5) - Transfer to creditimpaired financial assets (137) (2,740) 2,877 (399) (6,814) 7,213 (71) (19) 90 (2) (94) 96 - Provision for (reversal of) allowance (3,941) 478 - (12,373) (2,236) 186,704 (41,486) (28,830) 273,232 (6,003) 2,174 259 1,517 (370) 409 369,525 (17,560) 2 (17,5			Due	from ban	ıks		Househole	d		Corporate		Others		Other assets				
Beginning balance Transfer to 12 month expected credit losses 241 (241) - 16,830 (16,499) (331) 44,905 (43,205) (1,700) 805 (802) (3) 160 (158) (2) - Transfer to 12 month expected credit losses (19) 19 - (8,516) 16,266 (7,750) (32,494) 114,871 (82,377) (202) 332 (130) (98) 103 (5) - Transfer to crediting expected credit losses (19) 19 - (8,516) 16,266 (7,750) (32,494) 114,871 (82,377) (202) 332 (130) (98) 103 (5) - Transfer to crediting assets (137) (2,740) 2,877 (399) (6,814) 7,213 (71) (19) 90 (2) (94) 96 - Provision for (reversal of) allowance (3,941) 478 - (12,373) (2,236) 186,704 (41,486) (28,830) 273,232 (6,003) 2,174 259 1,517 (370) 409 369,525 (17,500) 410 410 410 410 410 410 410 410 410 410			Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Total
Transfer to lifetime expected credit losses (19) 19 - (8,516) 16,266 (7,750) (32,494) 114,871 (82,377) (202) 332 (130) (98) 103 (5) - Transfer to creditimpaired financial assets (137) (2,740) 2,877 (399) (6,814) 7,213 (71) (19) 90 (2) (94) 96 - Provision for (reversal of) allowance (3,941) 478 - (12,373) (2,236) 186,704 (41,486) (28,830) 273,232 (6,003) 2,174 259 1,517 (370) 409 Write-offs (226,348) - (226,348) - (226,161) - (8,718) - (8,718) - (133) (461,360) Effect of discounting (2,26,348) - (17,560) - (17,560) (17,560) Allowance related to loans transferred (241) (16,070) - (245) (30,429) (820) (820) (47,805) Recoveries		W	14,445	340	-	94,194	79,954			523,180			6,348	10,739	22,656	2,175	781	1,716,109
Transfer to lifetime expected credit losses (19) 19 - (8,516) 16,266 (7,750) (32,494) 114,871 (82,377) (202) 332 (130) (98) 103 (5) - Transfer to creditimpaired financial assets (137) (2,740) 2,877 (399) (6,814) 7,213 (71) (19) 90 (2) (94) 96 - Provision for (reversal of) allowance (3,941) 478 - (12,373) (2,236) 186,704 (41,486) (28,830) 273,232 (6,003) 2,174 259 1,517 (370) 409 369,525 (19) 200 200 200 200 200 200 200 200 200 20			241	(241)	-	16,830	(16,499)	(331)	44,905	(43,205)	(1,700)	805	(802)	(3)	160	(158)	(2)	-
Transfer to creditimpaired financial assets (137) (2,740) 2,877 (399) (6,814) 7,213 (71) (19) 90 (2) (94) 96 - Provision for (reversal of) allowance (3,941) 478 - (12,373) (2,236) 186,704 (41,486) (28,830) 273,232 (6,003) 2,174 259 1,517 (370) 409 369,525 (30,000) 2,174 259 1,517 (370) 409 409 409 409 409 409 409 409 409 409	Transfer to lifetime																	
impaired financial assets (137) (2,740) 2,877 (399) (6,814) 7,213 (71) (19) 90 (2) (94) 96 - Provision for (reversal of) allowance (3,941) 478 - (12,373) (2,236) 186,704 (41,486) (28,830) 273,232 (6,003) 2,174 259 1,517 (370) 409 369,525 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174 259 1,517 (6,003) 2,174	expected credit losses		(19)	19	-	(8,516)	16,266	(7,750)	(32,494)	114,871	(82,377)	(202)	332	(130)	(98)	103	(5)	-
Provision for (reversal of) allowance (3,941) 478 - (12,373) (2,236) 186,704 (41,486) (28,830) 273,232 (6,003) 2,174 259 1,517 (370) 409 369,525 Write-offs (226,348) (226,161) (8,718) (133) (461,360) Effect of discounting (226,348) (17,560) (17,560) Allowance related to loans transferred (241) (16,070) - (245) (30,429) (820) (47,805) Recoveries 58,620 43,357 1,876 515 104,368 Others (*1) 515 6 - 639 111 318 4,237 (83,849) (19,336) 438 176 30 (9,871) (106,586)																		
of) allowance (3,941) 478 - (12,373) (2,236) 186,704 (41,486) (28,830) 273,232 (6,003) 2,174 259 1,517 (370) 409 369,525 Write-offs (226,348) (226,161) (8,718) (133) (461,360) Effect of discounting (226,348) (17,560) (17,560) Allowance related to loans transferred (241) (16,070) - (245) (30,429) (820) (47,805) Recoveries 58,620 43,357 1,876 515 104,368 Others (*1) 515 6 - 639 111 318 4,237 (83,849) (19,336) 438 176 30 (9,871) (106,586)	assets		-	-	-	(137)	(2,740)	2,877	(399)	(6,814)	7,213	(71)	(19)	90	(2)	(94)	96	-
of) allowance (3,941) 4/8 - (12,3/3) (2,236) 186,704 (41,486) (28,830) 2/3,232 (6,003) 2,174 259 1,517 (370) 409 Write-offs (226,348) (226,161) (8,718) (133) (461,360) Effect of discounting (226,348) (17,560) (17,560) Allowance related to loans transferred (241) (16,070) - (245) (30,429) (820) (47,805) Recoveries 58,620 43,357 1,876 515 104,368 Others (*1) 515 6 - 639 111 318 4,237 (83,849) (19,336) 438 176 30 (9,871) (106,586)	`																	369 525
Effect of discounting Allowance related to loans transferred Recoveries Others (*1)	,		(3,941)	478	-	(12,373)	(2,236)	,	(41,486)		,	(6,003)	2,174		1,517	(370)	409	307,323
Allowance related to loans transferred (241) (16,070) - (245) (30,429) (820) (47,805) Recoveries 58,620 43,357 1,876 515 104,368 Others (*1) 515 6 - 639 111 318 4,237 (83,849) (19,336) 438 176 30 (9,871) (106,586)	Write-offs		-	-	-	-	-	(226,348)	-	-	(226,161)	-	-	(8,718)	-	-	(133)	
loans transferred - - - (241) (16,070) - (245) (30,429) - - - - - (47,805) Recoveries - - - - - 58,620 - - 43,357 - - 1,876 - - 515 104,368 Others (*1) 515 6 - 639 111 318 4,237 (83,849) (19,336) 438 176 30 (9,871) - - (106,586)	Effect of discounting		-	-	-	-	-	-	-	-	(17,560)	-	-	-	-	-	-	(17,560)
Recoveries 58,620 43,357 1,876 515 104,368 Others (*1) 515 6 - 639 111 318 4,237 (83,849) (19,336) 438 176 30 (9,871) (106,586)																		
Others (*1) 515 6 - 639 111 318 4,237 (83,849) (19,336) 438 176 30 (9,871) (106,586)	loans transferred		-	-	-	-	(241)	(16,070)	-	(245)	(30,429)	-	-	(820)	-	-	-	(47,805)
	Recoveries		-	-	-	-	-	58,620	-	-	43,357	-	-	1,876	-	-	515	
Ending balance \(\psi\) 11,241 602 - 90,637 74,615 129,161 345,920 475,108 391,076 9,120 8,209 3,323 14,362 1,656 1,661 1,556,691	Others (*1)		515	6		639			4,237	(83,849)	(19,336)	438			(9,871)			
	Ending balance	₩	11,241	602		90,637	74,615	129,161	345,920	475,108	391,076	9,120	8,209	3,323	14,362	1,656	1,661	1,556,691

^(*1) Other changes were due to debt restructuring, debt-equity swap and foreign exchange rate.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

- (b) Changes in allowance for impairment and book value (continued)
 - i) Changes in allowance for impairment for the years ended December 31, 2019 and 2018 were as follows: (continued)

December 31, 2018

									Loans								
		Due	e from bank	cs		Household			Corporate			Others			Other assets		
		Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Total
Beginning balance	₩	14,026	1,023	-	71,220	119,469	138,537	420,080	555,531	544,904	13,042	3,108	3,925	22,325	2,298	2,300	1,911,788
Transfer to 12 month																	
expected credit losses		261	(261)	-	44,654	(44,285)	(369)	47,190	(47,040)	(150)	438	(438)	-	258	(257)	(1)	-
Transfer to lifetime																	_
expected credit losses		(5)	5	-	(5,374)	10,910	(5,536)	(39,016)	75,175	(36,159)	(249)	252	(3)	(114)	124	(10)	
Transfer to credit- impaired					(1.60)	(2.610)	2.706	(505)	(11.22.4)	11.020	(50)	(1.41)	104	(2)	(60)		_
financial assets		-	-	-	(168)	(2,618)	2,786	(595)	(11,234)	11,829	(53)	(141)	194	(3)	(66)	69	
Provision for (reversal of)		(00)	(447)		(1.6.600)	(2.500)	157.003	(50.046)	(5(122)	200.006	004	2.552	10.700	(2.1(0)	0.2	(77	243,713
allowance		(99)	(447)	-	(16,698)	(3,589)	157,882	(59,946)	(56,123)	208,896	894	3,553	10,790	(2,160)	83	677	
Write-offs		-	-	-	-	-	(207,453)	-	-	(274,444)	-	-	(2,567)	-	-	(65)	(484,529)
Effect of discounting		-	-	-	-	-	-	-	_	(15,086)	-	-	-	-	-	-	(15,086)
Allowance related to loans																	
transferred		-	-	-	-	(17)	(4,159)	-	(357)	(52,094)	-	-	(2,454)	-	(7)	(2,736)	(61,824)
Recoveries		_	-	-	-	-	49,222	-	-	62,337	-	-	847	-	-	547	112,953
Others (*1)		262	20	-	560	84	231	3,444	7,228	(5,196)	90	14	7	2,350	-	-	9,094
Ending balance	₩	14,445	340	_	94,194	79,954	131,141	371,157	523,180	444,837	14,162	6,348	10,739	22,656	2,175	781	1,716,109

^(*1) Other changes were due to debt restructuring, debt-equity swap and foreign exchange rate.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

- (b) Changes in allowance for impairment and book value (continued)
 - ii) Changes in book value of due from banks, loans and other assets for the years ended December 31, 2019 and 2018 were as follows:

																_	
								Loans									
	i	Other assets			Others			Corporate			Household			from banks	Due f		
Total	Stage 3	Stage 2	Stage 1	Stage 3	Stage 2	Stage 1	Stage 3	Stage 2	Stage 1	Stage 3	Stage 2	Stage 1	Stage 3	Stage 2	Stage 1		
77,235,815	1,847	54,975	14,169,589	16,661	606,449	5,796,137	799,513	20,662,405	111,937,650	296,597	6,625,354	105,672,489	-	3,816	10,592,333	W	Beginning balance
																	Transfer to 12 month
_	(7)	(11,061)	11,068	(4)	(37,516)	37,520	(4,048)	(3,889,945)	3,893,993	(3,814)	(2,556,951)	2,560,765	-	(1,016)	1,016		expected credit losses
_																	
	(21)	41,581	(41,560)	(172)	212,229	(212,057)	(112,170)	15,818,112	(15,705,942)	(19,300)	5,271,857	(5,252,557)	-	204,668	(204,668)		1
-																	
	3,086	(496)		41,149	(39)	. , ,	1,111,930	(49,122)	(' ' '	613,858	(32,739)	(/ /	-	-			
53,579,110	-	-	, ,	-	-		-	-	, ,	-	-			-	, ,		
26,972,172)	` /	(26,978)	(8,890,494)	(, ,	(150,563)	(5,975,266)	. , ,	(9,544,705)	(50,921,800)	, ,	(1,662,438)	(26,216,222)	-	(203,040)	(22,790,213)		
(461,360)	(133)	-	-	(8,718)	-	-	(226,161)	-	-	(226,348)	-	-	-	-	-		
																	Allowance related to
(413,881)	(1,061)	(3)	-	(18,398)	-	-		(3,806)	-	(101,765)	(5,122)	-	-	-	-		loans transferred
1,303,864		<u>-</u>		38	968		(49,333)	(45,196)	724,418	766	434	258,050	-	40	270,920		Others (*1)
04,271,376	3,477	58,018	13,474,712	17,604	631,528	5,366,352	876,228	22,947,743	116,142,571	342,504	7,640,395	115,236,704	-	4,468	21,529,072	W	Ending balance
7 26	1,847 (7) (21) 3,086 (234) (133) (1,061)	54,975 (11,061) 41,581 (496) (26,978)	14,169,589 11,068 (41,560) (2,590) 8,228,699 (8,890,494)	16,661 (4) (172) 41,149 (12,952) (8,718) (18,398) 38	(37,516) 212,229 (39) (150,563)	5,796,137 37,520 (212,057) (41,110) 5,618,369 (5,975,266)	799,513 (4,048) (112,170) 1,111,930 (359,777) (226,161) (283,726) (49,333)	20,662,405 (3,889,945) 15,818,112 (49,122) (9,544,705) (3,806) (45,196)	111,937,650 3,893,993 (15,705,942) (1,062,808) 67,277,060 (50,921,800)	296,597 (3,814) (19,300) 613,858 (217,490) (226,348) (101,765) 766	6,625,354 (2,556,951) 5,271,857 (32,739) (1,662,438) (5,122) 434	105,672,489 2,560,765 (5,252,557) (581,119) 38,795,298 (26,216,222)	- - - - - - -	3,816 (1,016) 204,668 (203,040)	10,592,333 1,016 (204,668) 33,659,684 (22,790,213)		Transfer to 12 month expected credit losses Transfer to lifetime expected credit losses Transfer to credit- impaired financial assets Origination Recoveries Write-offs Allowance related to loans transferred Others (*1)

^(*1) Other changes were due to debt restructuring, debt-equity swap and foreign exchange rate.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

- (b) Changes in allowance for impairment and book value (continued)
 - ii) Changes in book value of due from banks, loans and other assets for the years ended December 31, 2019 and 2018 were as follows: (continued)

	_							Ε	December 31,	2018							
									Loans								
	_	Due f	rom banks			Household			Corporate			Others			Other assets		
		Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Total
Beginning balance	W	16,562,220	364,251	-	96,289,682	7,168,246	266,402	104,824,273	17,479,091	926,327	4,752,669	487,039	13,094	9,048,043	54,931	4,181	258,240,449
Transfer to 12 month																	
expected credit losses		13,815	(13,815)	-	3,344,109	(3,340,492)	(3,617)	3,478,038	(3,477,544)	(494)	71,331	(71,331)	-	14,068	(14,066)	(2)	-
Transfer to lifetime																	
expected credit losses		(3,777)	3,777	-	(4,825,295)	4,840,362	(15,067)	(14,534,008)	14,582,658	(48,650)	(367,927)	367,931	(4)	(50,666)	50,677	(11)	-
Transfer to credit-																	
impaired financial																	-
assets		-	-	-	(504,905)	(28,097)	533,002	(1,327,660)	(34,445)	1,362,105		(8,558)	33,581	(14,206)	(248)	14,454	
Origination		5,499,513	-		35,343,577	-	-	67,962,815	-	-	5,300,176	-	-	10,762,919	-	-	124,869,000
Recoveries		(11,627,567)	(348,973)	-	(24,189,594)	(2,011,870)	(202,453)	(48,964,496)	(7,991,089)		(4,030,497)	(170,856)	(12,898)	(5,590,569)	(35,824)	(3,628)	(105,830,329)
Write-offs		-	-	-	-	-	(207,453)	-	-	(274,444)	-	-	(2,567)	-	-	(65)	(484,529)
Allowance related to																	(612,958)
loans transferred		-	-	-	-	(3,059)	(74,664)	-	(15,997)	(491,107)	-	-	(14,554)	-	(495)	(13,082)	
Others (*1)	_	148,129	(1,424)	-	211,713	264	447	498,688	119,731	(24,209)	95,408	2,224	9		-	<u>-</u>	1,054,182
Ending balance	W	10,592,333	3,816	-	105,672,489	6,625,354	296,597	111,937,650	20,662,405	799,513	5,796,137	606,449	16,661	14,169,589	54,975	1,847	277,235,815

^(*1) Other changes were due to debt restructuring, debt-equity swap and foreign exchange rate.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

9. Loans (continued)

(c) Changes in deferred loan origination costs for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Beginning balance	₩	496,263	426,523
Loan origination		242,257	269,788
Amortization		(240,716)	(200,048)
Ending balance	W	497,804	496,263

10. Securities at fair value through other comprehensive income and Securities at amortized cost

(a) Details of securities at FVOCI and securities at amortized cost as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Securities at FVOCI:			_
Debt securities:			
Government bonds	W	10,481,889	7,712,975
Financial institutions bonds		18,267,439	15,404,298
Corporate bonds	_	11,311,406	8,318,273
		40,060,734	31,435,546
Equity securities:			
Stocks		520,230	438,570
Equity investments		3,983	4,232
Others		70,958	<u> </u>
	_	595,171	442,802
	W	40,655,905	31,878,348
Securities at amortized cost:			
Debt securities:			
Government bonds	\mathbf{W}	12,570,196	11,695,562
Financial institutions bonds		3,378,630	929,756
Corporate bonds		4,141,357	4,129,043
Others		167,016	74,803
		20,257,199	16,829,164
Allowance for impairment		(5,311)	(4,764)
	W	20,251,888	16,824,400

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

10. Securities at fair value through other comprehensive income and Securities at amortized cost (continued)

(a) Details of securities at FVOCI and securities at amortized cost as of December 31, 2019 and details of available-for-sale financial assets and held-to-maturity financial assets as of December 31, 2018 were as follows: (continued)

Details of equity instruments designated at FVOCI as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Marketable securities	W	183,445	136,170
Non-marketable securities		336,785	302,400
Others		74,941	4,232
	w _	595,171	442,802

The Group designated the above equity instruments at FVOCI, in accordance with the Group's policy.

Cumulative net losses reclassified in equity upon disposition of equity securities for the years ended December 31, 2019 and 2018 were (-)\psi 10,563 million and (-)\psi 4,399 million, respectively and cumulated net gains replaced by the reclassification of the account for the year ended December 31, 2019 were \psi 2,759 million.

(b) Gains and losses on sale of securities at FVOCI for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Gain on sale of securities at FVOCI	W	110,793	18,049
Loss on sale of securities at FVOCI		(3,160)	(1,662)
	W	107,633	16,387

The Group disposed equity instruments that are measured at FVOCI for debt-equity swap. At the time of disposal, fair value of equity instruments for the years ended December 31, 2019 and 2018 were \text{\$\pi 39,273\$ million and \$\pi 2,379\$ million, respectively and cumulative net losses were (-)\$\pi 10,563\$ million and (-)\$\pi 4,399\$ million, respectively.

(c) There were no disposal of securities at amortized cost for the years ended December 31, 2019 and 2018.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

10. Securities at fair value through other comprehensive income and Securities at amortized cost (continued)

- (d) Changes in allowance for credit loss of securities at FVOCI and securities at amortized cost
 - i) Changes in allowance for credit loss of securities at FVOCI and securities at amortized cost for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019									
			Securities at	t FVOCI		Securities at amortized cost					
		12-month expected credit losses	Lifetime expected credit losses	Credit- impaired financial assets	Total	12-month expected credit losses	Lifetime expected credit losses	Credit- impaired financial assets	Total		
Beginning balance Transfer to 12-	₩	20,202	362	-	20,564	4,746	18	-	4,764		
month expected credit losses Transfer to		33	(33)	-	-	4,301	(4,301)	-	-		
lifetime expected credit losses		(60)	60	_	-	_		_	-		
Transfer to impaired financial assets					_						
Provision Provision		_	_		_	_		_	_		
(reversal)		6,729	(2,616)	-	4,113	(3,717)	4,295	-	578		
Disposals		(5,256)	(258)	-	(5,514)	_	-	-	-		
Others (*1)		(1,177)	3,140	-	1,963	(31)			(31)		
Ending balance	W	20,471	655		21,126	5,299	12	-	5,311		

^(*1) Other changes were due to foreign exchange rate changes, etc.

December 31, 2018 Securities at FVOCI Securities at amortized cost Lifetime Credit-Creditimpaired 12-month expected impaired 12-month Lifetime expected expected expected credit financial financial credit losses losses assets Total credit losses credit losses assets Total Beginning W balance 1,938 17,099 5,353 2,232 7,585 15,161 Transfer to 12month expected credit losses Transfer to lifetime expected credit losses 234 (234)Transfer to impaired financial assets Provision (reversal) 11,615 (3,220)8,395 1,093 (2,214)(1,121)Disposals (5,223)(229)(5,452)Others (*1) (1,117)1,639 522 (1,700)(1,700)Ending balance 20,202 362 20,564 4,746 18 4,764

^(*1) Other changes were due to foreign exchange rate changes, etc.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

10. Securities at fair value through other comprehensive income and Securities at amortized cost (continued)

(ii) Changes in book value of securities at FVOCI and securities at amortized cost for the years ended December 31, 2019 and 2018 were as follows:

			Securities at	FVOCI			Securities at amortized cost				
		12-month expected credit losses	Lifetime expected credit losses	Credit- impaired financial assets	Total	12-month expected credit losses	Lifetime expected credit losses	Credit- impaired financial assets	Total		
Beginning balance	W	31,329,716	105,830	-	31,435,546	16,806,690	22,474	-	16,829,164		
Transfer to 12- month expected credit losses Transfer to lifetime		34,555	(34,555)	-	-	20,198	(20,198)	-	-		
expected credit losses Transfer to impaired		(64,928)	64,928	-	-	-	-	-	-		
financial asset		-	_	-	-	-	-	-	-		
Acquisitions		38,854,287	61,410	-	38,915,697	9,692,417	-	-	9,692,417		
Disposals		(11,089,848)	(10,222)	-	(11,100,070)	-	-	-	-		
Redemption		(19,184,084)	-	-	(19,184,084)	(6,394,739)	-	_	(6,394,739)		
Others (*1)		(58,058)	51,703	-	(6,355)	109,359	20,998	-	130,357		
Ending balance	W	39,821,640	239,094	-	40,060,734	20,233,925	23,274	-	20,257,199		

(*1) Other changes were due to foreign exchange rate changes, etc.

			December 31, 2018										
			Securities at	FVOCI			Securities at an	nortized cost					
		12-month expected credit losses	Lifetime expected credit losses	Credit- impaired financial assets	Total	12-month expected credit losses	Lifetime expected credit losses	Credit- impaired financial assets	Total				
Beginning	W	20.021.490	15 070		20.047.267	14 001 454	21.444		14 922 909				
balance Transfer to 12-	₩	29,931,489	15,878	-	29,947,367	14,801,454	21,444	-	14,822,898				
month expected credit losses		-	-	-	-	-	_	-	-				
Transfer to lifetime expected credit													
losses Transfer to		(26,187)	26,187	-	-	-	=	-	-				
impaired financial asset													
Acquisitions		22 (00 000	00.770	-	22 (00 (97	2.751.101	-	-	2.751.101				
Disposals		23,600,909	98,778	-	23,699,687	3,751,191	-	-	3,751,191				
Redemption		(4,881,887)	(18,687)	-	(1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-	-	-	-				
-		(18,199,108)	-	-	(10,1),100)	(1,846,929)	(3)	-	(1,846,932)				
Others (*1)		904,500	(16,326)	-	888,174	100,974	1,033	<u>-</u>	102,007				
Ending balance	W	31,329,716	105,830	-	31,435,546	16,806,690	22,474	<u> </u>	16,829,164				

^(*1) Other changes were due to foreign exchange rate changes, etc.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

11. Property and equipment

(a) Details of property and equipment as of December 31, 2019 and 2018 were as follows:

	_		December 31, 2019						
			Accumulated						
		Acquisition cost	depreciation	Book value					
Land	W	1,247,774	-	1,247,774					
Buildings (*1)		864,864	(329,734)	535,130					
Right-of-use assets		658,330	(182,024)	476,306					
Others		1,359,287	(1,153,208)	206,079					
	W	4,130,255	(1,664,966)	2,465,289					

(*1) \square 572 million of government subsidy was deducted from book value.

			December 31, 2018	
		Acquisition cost	depreciation	Book value
Land	W	1,251,039	-	1,251,039
Buildings (*1)		852,029	(279,649)	572,380
Others		1,337,159	(1,146,166)	190,993
	₩ _	3,440,227	(1,425,815)	2,014,412

(*1) \text{\text{\$\psi}}494\text{ million of government subsidy was deducted from book value.}

(b) Changes in property and equipment for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019							
	_			Right-of-use					
	_	Land	Buildings	assets	Others	Total			
Beginning balance (*1)	₩	1,251,039	572,380	502,364	184,184	2,509,967			
Acquisitions (*2)(*3)		69,046	14,347	209,864	108,597	401,854			
Disposals and write-offs (*4)		(32)	(769)	(2,934)	(19,451)	(23,186)			
Depreciation		-	(49,490)	(235,785)	(74,294)	(359,569)			
Amounts transferred to investment properties Amounts transferred to non-		(72,173)	(2,693)	-	-	(74,866)			
current assets held for sale		(410)	(45)	-	-	(455)			
Effects of foreign currency movements	_	304	1,400	2,797	7,043	11,544			
Ending balance	₩	1,247,774	535,130	476,306	206,079	2,465,289			

^(*1) The beginning balance was restated in accordance with K-IFRS No.1116.

^{(*2) \}times 76,004 million transferred from construction-in progress was included.

^{(*3) \}psi_2,280 million of provision for the asset retirement related to newly acquired assets was included.

^{(*4) \}prescript{\psi}9,001 million of write-off was included.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

11. Property and equipment (continued)

(b) Changes in property and equipment for the years ended December 31, 2019 and 2018 were as follows: (continued)

		December 31, 2018					
	_	Land	Buildings	Others	Total		
Beginning balance	W	1,260,239	605,303	190,333	2,055,875		
Acquisitions (*1)(*2)(*3)		-	11,558	82,757	94,315		
Disposals and write-offs (*4)		(17,262)	(1,742)	(8,188)	(27,192)		
Depreciation		-	(41,228)	(77,339)	(118,567)		
Amounts transferred from (to) investment properties Amounts transferred to non-current assets		6,529	(2,314)	-	4,215		
held for sale		(33)	(46)	-	(79)		
Effects of foreign currency movements		1,566	849	3,430	5,845		
Ending balance	₩	1,251,039	572,380	190,993	2,014,412		

^{(*1) \(\}forall \)6,319 million transferred from construction-in progress was included.

(c) Insured assets and liability insurances as of December 31, 2019 were as follows:

Type of insurance	Insured assets		Amount covered	Insurance company
Comprehensive insurance for				Samsung Fire & Marine
financial institutions				Insurance Co., Ltd. and 4
illianciai ilistitutions	Cash & securities	W	20,000	other insurance companies
Property insurance	Real estate &			Samsung Fire & Marine
	movable properties for			Insurance Co., Ltd., etc.
	business purpose		833,394	and 4 other insurance companies
Burglary insurance				Samsung Fire & Marine
				Insurance Co., Ltd., etc and 3
	Cash & securities		60,000	other insurance companies
				Meritz Fire & Marine
Compensation liability insurance				Insurance Co., Ltd., etc.
for officers				and 6 other insurance
	-		50,000	companies
Compensation liability insurance				Meritz Fire & Marine
for gas accident	Real estate		500	Insurance Co., Ltd.
Compensation liability insurance				
for personal information				Hyundai Marine & Fire
protection	-		10,000	Insurance Co., Ltd.
Compensation liability				
insurance for electronic				Lotte Insurance Co., Ltd.,
financial transaction	-		2,000	etc.
Compensation liability insurance				Samsung Fire & Marine
for casualty	Real estate		1,000	Insurance Co., Ltd.
Compaensation liability				Samsung Fire & Marine
insurance for elevator accidents	-	_	80	Insurance Co., Ltd.
		W _	976,974	

Besides the insurances listed above, the Group also has automobile liability insurance, medical insurance for employees, and casualty insurance for protecting property and employees.

^{(*2) \}prescript{\psi}1,810 million of provision for the asset retirement related to newly acquired assets was included.

^{(*3) \}times 897 million among acquisition cost of others was accounted for as accounts payable.

^{(*4) \}prescript{\psi}1,521 million of write-off was included.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

12. Leases

(a) The details of the right-of-use assets by the lessee's underlying asset type as of December 31, 2019 were as follows:

			December 31, 2019	
		Acquisition cost	Accumulated depreciation	Book value
Real estate	₩	611,619	(166,487)	445,132
Vehicle		27,628	(8,557)	19,071
Others		19,083	(6,980)	12,103
	₩	658,330	(182,024)	476,306

(b) The details of the changes in the right-of-use assets for the year ended December 31, 2019 were as follows:

		December 31, 2019					
		Real estate	Vehicle	Others	Total		
Beginning balance	W	472,397	17,810	12,157	502,364		
Acquisitions		191,195	11,645	7,024	209,864		
Disposals		(2,530)	(309)	(95)	(2,934)		
Depreciation		(218,637)	(10,165)	(6,983)	(235,785)		
Effects of foreign currency							
movements		2,707	90	-	2,797		
Ending balance	W	445,132	19,071	12,103	476,306		

(c) The details of the maturity of the lease liability as of December 31, 2019 were as follows:

		December 31, 2019							
	_	1 month or less	1 month ~ 3 months or less	3 months ~ 6 months or less	6 months ~ 1 year or less	1 year ~ 5 years or less	More than 5 years	Total	
Real estate	W	18,024	29,523	40,264	71,705	252,168	15,238	426,922	
Vehicle		2,160	1,622	2,337	4,460	10,625	-	21,204	
Others	_	924	925	1,183	1,986	7,794		12,812	
	W	21,108	32,070	43,784	78,151	270,587	15,238	460,938	

The abovementioned amounts have been classified as the earliest due dates on which the Group's payment obligation arises based on undiscounted cash flows.

(d) For the year ended December 31, 2019, lease payment for leases of low value items was amounted to \w3,201 million and there has been no short term lease.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

13. Intangible assets

(a) Changes in intangible assets for the years ended December 31, 2019 and 2018 were as follows:

	_	December 31, 2019								
				Development						
		Goodwill	Software	cost	Memberships	Others	Total			
Beginning balance	₩	73,374	63,264	46,499	48,597	84,495	316,229			
Acquisitions (*1)		-	37,797	19,381	93	650,824	708,095			
Disposals		-	(1,042)	(3,695)	(413)	(26)	(5,176)			
Impairment (*2)		-	-	-	-	(151,523)	(151,523)			
Amortization (*3)		-	(21,599)	(18,222)	-	(173,206)	(213,027)			
Effects of foreign currency										
movements			848		40	863	1,751			
Ending balance (*4)	₩	73,374	79,268	43,963	48,317	411,427	656,349			

- (*1) Included intangible assets related to the rights to be the depository bank of municipal and provincial governments.
- (*2) The Group reviewed the recoverable value of intangible assets related to the rights to be the depository bank of municipal and provincial governments due to the performance below forecast and future prospects. As a result of the review, the Group recognized impairment loss amounted to \times151,523 million for the year ended December 31, 2019. The impairment loss was included in the financial performance of the retail banking segment, and included in the non-operating expenses in the consolidated statement of comprehensive income.
- (*3) W168,736 million among amortization cost of other intangible assets was included in net other operating expenses.
- (*4) \text{\$\psi\$436,376 million among other intangible assets was accounted for as accounts payable.

	December 31, 2018								
		Development							
Goodwill	Software	cost	Memberships	Others	Total				
¥ 73,37	4 49,117	43,416	46,916	86,756	299,579				
	- 36,867	18,020	4,286	35,157	94,330				
		-	(2,619)	-	(2,619)				
	- (26,401)	(14,937)	-	(36,122)	(77,460)				
	- 3,681		14	(1,296)	2,399				
V 73,374	4 63,264	46,499	48,597	84,495	316,229				
	73,374	73,374 49,117 - 36,867 - (26,401) - 3,681	Goodwill Software Development cost 73,374 49,117 43,416 - 36,867 18,020 - - - - (26,401) (14,937) - 3,681 -	Goodwill Software cost Memberships Y 73,374 49,117 43,416 46,916 - 36,867 18,020 4,286 - - - (2,619) - (26,401) (14,937) - - 3,681 - 14	Goodwill Software Development cost Memberships Others V 73,374 49,117 43,416 46,916 86,756 - 36,867 18,020 4,286 35,157 - - (2,619) - - (26,401) (14,937) - (36,122) - 3,681 - 14 (1,296)				

^{(*1) \}prescript{\psi}12,337 million among acquisition cost of other intangible assets was accounted for as accounts payable.

^(*2) W33,573 million among amortization cost of other intangible assets was included in other operating expenses.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

13. Intangible assets (continued)

(b) Goodwill

i) The carrying amounts of goodwill allocated to each Cash-Generating Unit ("CGU") as of December 31, 2019 and 2018 were as follows:

CGU		December 31, 2019	December 31, 2018
PT Bank Shinhan Indonesia	W	45,175	45,175
Shinhan Bank Vietnam Co., Ltd.		28,199	28,199
	W	73,374	73,374

ii) Impairment test

The recoverable amounts of CGUs are determined on the basis of value-in-use calculations using discounted cash flow (DCF) model.

Impairment test results on goodwill of PT Bank Shinhan Indonesia and Shinhan Bank Vietnam Co., Ltd were as follows:

a Measurement date and projection period

The recoverable amounts are measured as of June 30, 2019. The projection period used in value-in-use calculations is 5.5 years (July 2019 through December 2024) considering synergy effect of business combinations and the value-in-use after projection period is estimated on the assumption that the future cash flows will increase by perpetual growth rate for every year.

(b) Significant assumptions

The expected future cash flows from the cash-generating unit are based on the CPI growth rate, market size and the market share of the Group. Major unobservable assumptions applied during the forecast period are as follows:

	Net interest	Net commission	General administrative	(Unit: %)
Cash-generating units	income growth rate	income growth rate	expenses growth rate	Net income growth rate
	<u> </u>			<u> </u>
PT Bank Shinhan Indonesia	19.15	15.31	10.71	28.23
Shinhan Bank Vietnam Co., Ltd.	3.12	6.57	3.79	1.41

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

13. Intangible assets (continued)

(b) Goodwill (continued)

(b) Significant assumptions (continued)

The cost of equity capital is calculated by taking into account the systematic risk of the company in the market risk premium paid in return for risk free rate. Terminal growth rate was estimated based on inflation and did not exceed the projected long-term average growth rate of the relevant industry report.

(Unit: %)

Cash-generating units	Discount rate	Terminal growth rate
PT Bank Shinhan Indonesia	12.30	3.00
Shinhan Bank Vietnam Co., Ltd.	13.90	3.00

© Significant assumptions

The carrying amounts and recoverable amounts of the CGUs to which goodwill has been allocated as of valuation date were as follows:

		PT Bank Shinhan	Shinhan Bank
		Indonesia	Vietnam Co., Ltd.
Recoverable amount	₩	458,761	804,543
Carrying amount		435,369	708,733
Recoverable amount in excess of carrying amount	W	23,392	95,810

As a result of the impairment test of goodwill, the recoverable amounts of the CGUs to which goodwill is allocated exceeded the carrying amounts, therefore no impairment is recognized.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

14. Investments in associates

(a) Investments in associates as of December 31, 2019 and 2018 were as follows:

			Ownership (%)			
			December 31,	December 31,		
Investees	Location	Reporting date	2019	2018		
BNP Paribas Cardif Life Insurance Co., Ltd.						
(*1)(*2)	Korea	September 30	14.99	14.99		
KOREA FINANCE SECURITY (*1)(*7)	Korea	September 30	14.91	-		
Daewontos Co., Ltd. (*5)	Korea	-	-	36.33		
DAEGY Electrical Construction Co., Ltd.						
(*3)(*4)	Korea	September 30	27.45	27.45		
YEONWOONG SYSTEM (*5)	Korea	-	-	21.77		
DOODOO LOGITECH (*1)(*3)	Korea	September 30	27.96	27.96		
Neoplux Technology Valuation Investment						
Fund (*1)	Korea	September 30	33.33	33.33		
Partners 4th Growth Investment Fund (*1)	Korea	September 30	25.00	25.00		
KTB Newlake Global Healthcare PEF (*1)	Korea	September 30	20.00	20.00		
JAEYOUNG SOLUTEC Co., Ltd. (*5)	Korea	-	-	25.90		
Tigris-Aurum Fund 1 (*5)	Korea	-	-	27.27		
DAEKWANG SEMICON DUCTOR Co., Ltd.						
(*1)(*3)	Korea	September 30	20.94	20.94		
Songrim Co., Ltd. (*3)(*4)	Korea	December 31	35.34	35.34		
Taihan Industrial System Co., Ltd. (*6)	Korea	-	-	28.29		
Multimedia Tech Co., Ltd. (*3)	Korea	December 31	21.06	-		
Hyungje art printing (*3)(*4)	Korea	December 31	31.54	31.54		
MIEL Co., Ltd. (*3)	Korea	December 31	28.77	-		
WON JIN HOME PLAN Co., Ltd. (*3)(*4)	Korea	December 31	31.69	-		
IL GU FARM Co., Ltd. (*3)(*4)	Korea	December 31	28.47	-		
Korea Credit Bureau (*1)(*7)	Korea	September 30	4.50	-		
Goduck Gangill PFV Co., Ltd. (*7)(*8)	Korea	December 31	1.04	-		
SBC PFV Co., Ltd. (*7)(*8)(*9)	Korea	December 31	12.50	-		
GMG Development Co., Ltd. (*7)(*8)(*10)	Korea	December 31	5.00	-		
ICSF (The Korea's Information Center for						
Savings & Finance) (*4)	Korea	December 31	32.26	32.26		
Shinhan-Albatross Technology Investment						
Fund	Korea	December 31	33.33	33.33		
Miraeequity-Incus Venture Business Fund						
No.4	Korea	December 31	23.53	23.53		
Shinhan-Neoplux Energy Newbiz Fund (*1)	Korea	September 30	23.33	23.33		
Stassets-DA Value Healthcare Fund I (*1)	Korea	September 30	24.10	24.10		

- (*1) Financial statements as of September 30, 2019 were used for the equity method accounting since the financial statements as of December 31, 2019 were not available. Significant trades and events occurred within the period were properly reflected.
- (*2) The Group used equity method accounting as the Group has significant influence over the investee through significant operating transactions.
- (*3) The shares of the investees were acquired by debt-equity swap. The Group reclassified financial assets at FVOCI to investments in associates as the reorganization procedures were completed and now the Group can normally exercise its voting rights to the investees.
- (*4) The latest financial statements available were used for the equity method accounting since the financial statements as of December 31, 2019 were not available. Significant trades and events occurred within the period were properly reflected.
- (*5) These investees were sold and excluded from the associates during the year ended December 31, 2019.
- (*6) As it does not have significant influence, it was excluded from associates during the year ended December 31, 2019
- (*7) Although it holds less than 20% of shares, the equity method is applied for evaluation since the Group has significant influence on the investee, such as participation in their decision making.
- (*8) The Group newly acquired these associates during the year ended December 31, 2019.
- (*9) Voting right was 4.65%.
- (*10) Voting right was 14.91%.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

14. <u>Investments in associates (continued)</u>

(b) Changes in investments in associates for the years ended December 31, 2019 and 2018 were as follows:

					Decembe	er 31, 2019			
Associates	_	Acqui- sition cost	Beginning balance	Acquisition (redemption)	Gain from disposal	Share of profit (loss) of associates	Share of other comprehe- nsive income (loss) of associates	Dividends received	Ending balance
,	W	42,204	49,841	-	-	(526)	3,660	(375)	52,600
KOREA FINANCE SECURITY (*1)		3,448	-	3,448	-	(213)	-	-	3,235
Daewontos Co., Ltd. (*2)		-	-	-	-	-	-	-	-
DAEGY Electrical Construction Co., Ltd.		-	109	-	-	-	-	-	109
YEONWOONG SYSTEM		-	76	(76)	-	_	-	-	_
DOODOO LOGITECH		-	44	-	-	(37)	-	-	7
Neoplux Technology Valuation Investment Fund		17,406	18,738	(1,662)	_	(692)	-	-	16,384
Partners 4th Growth Investment Fund		16,697	16,612	(1,219)	_	(476)			14,917
KTB Newlake Global Healthcare PEF		8,036	6,590	1,000	_	(69)		_	7,521
Jaeyang Industry		- 0,030	- 0,570		_	-	_	_	
Tigris-Aurum Fund 1 DAEKWANG SEMICON DUCTOR		1,500	1,391	(1,500)	425	-	-	(316)	-
Co., Ltd.		-	3,334	-	-	51	2	-	3,387
Songrim Co., Ltd. (*2)		-	-	-	-	-	-	-	-
Taihan Industrial System Co., Ltd. (*2)		-	-	-	-	-	-	-	-
Multimedia Tech Co., Ltd.		_	_	_	_	19	_	_	19
Hyungje Art Printing (*2)		-	-	-	-	-	-	-	-
MIEL Co., Ltd. (*3)		-	-	-	-	-	-	-	-
WON JIN HOME PLAN Co., Ltd.		-	-	-	-	183	-	_	183
IL GU FARM Co., Ltd.		-	-	-	-	-	-	-	-
Korea Credit Bureau (*1) Goduck Gangill PFV		2,250	-	2,250	-	1,156	-	-	3,406
Co., Ltd.		50	-	50	-	(2)	-	-	48
SBC PFV Co., Ltd. GMG Development Co.,		10,000	-	10,000	-	-	-	-	10,000
Ltd. ICSF (The Korea's		3	-	3	-	-	-	-	3
Information Center for Savings & Finance) Shinhan-Albatross		156	149	-	-	(1)	-	-	148
Technology Investment Fund Miraeequity-Incus		6,000	5,942	-	-	196	(306)	-	5,832
Venture Business Fund No.4		2,000	1,957	-	-	(41)	-	-	1,916

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

14. <u>Investments in associates (continued)</u>

(b) Changes in investments in associates for the years ended December 31, 2019 and 2018 were as follows: (continued)

					Decemb	er 31, 2019			
							Share of		
							other		
							comprehe-		
				Acqui-	Gain	Share of	nsive		
		Acqui-		sition	(loss)	profit	income	5	
		sition	Beginning	(redemp-	from	(loss) of	(loss) of	Dividends	Ending
Associates		cost	balance	tion)	disposal	associates	associates	received	balance
Shinhan-Neoplux Energy									
Newbiz Fund	₩	8,400	3,974	4,200	-	(294)	-	-	7,880
Stassets-DA Value									
Healthcare Fund I	_	615	985	(384)		(17)			584
	W	117,546	109,742	16,110	425	(763)	3,356	(691)	128,179

^(*1) Redemption represents disposal amounts by reclassification without any cash flows.

^(*2) They are the items with a carrying amount of zero due to cumulative unrealized losses since initial acquisition.

^(*3) No gain or loss on equity method has occurred since the term debt-equity swap was acquired during the year.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

14. <u>Investments in associates (continued)</u>

(b) Changes in investments in associates for the years ended December 31, 2019 and 2018 were as follows: (continued)

					Decemb	er 31, 2018			
Associates		Acqui- sition cost	Beginning balance	Acquisition (redemption)	Gain (loss) from disposal	Share of profit (loss) of associates	Share of other comprehe- nsive income (loss) of associates	Dividends received	Ending balance
,	₩	42,204	52,652	-	-	771	(1,540)	(2,042)	49,841
Daewontos Co., Ltd.		-	205	-	(205)	-	-	-	-
Inhee Co., Ltd. (*1) DAEGY Electrical		-	205	-	(205)	-	-	-	-
Construction Co., Ltd. YEONWOONG		-	109	-	-	-	-	-	109
SYSTEM		_	77	-	_	(1)	_	_	76
DOODOO LOGITECH		-	163	-	-	(119)	-	-	44
Neoplux Technology									
Valuation Investment Fund JAEYOUNG		19,068	13,470	6,000	-	(242)	(490)	-	18,738
SOLUTECH Co., Ltd. (*1)		6,238	3,848	(9,375)	6,500	(836)	(137)	-	-
Partners 4th Growth Investment Fund KTB Newlake Global		16,697	13,390	2,596	-	626	-	-	16,612
Healthcare PEF		7,036	1,769	4,980	-	(159)	-	-	6,590
Jaeyang Industry		1 500	1 426	-	-	(45)	-	-	1 201
Tigris-Aurum Fund 1 Chungyoung INC.		1,500	1,436	-	-	(45)	-	-	1,391
DAEKWANG SEMICON DUCTOR		_	-	-	-	-	-	-	-
Co., Ltd.		_	3,825	_	-	(491)	_	_	3,334
Branbuil Co., Ltd. (*1)		-	-	(163)	163	-	-	-	-
Songrim Co., Ltd.		-	48	-	-	(48)	-	-	-
Taihan Industrial System		_							
Co., Ltd.			-	-	-	-	-	-	-
Hyungje Art Printing ICSF (The Korea's Information Center for		156	156	-	-	- (7)	-	-	149
Savings & Finance) Shinhan-Albatross Technology Investment		130	130	-	-	(7)	-	-	149
Fund		6,000	1,782	4,000	-	(146)	306	-	5,942
Loggia		37	26	-	(26)	-	-	-	-
Quantum-Nvestor Fund No.1 (*1)		1,000	993	(1,000)	738	-	-	(731)	_
Lodestone 1st Private Equity Fund (*1)		2,000	1,991	(2,170)	179	-	_	-	_
Miraeequity-Incus Venture Business Fund No.4		2,000	1,996	-	-	(39)	-	-	1,957
LB Technology Fund 1 (*1)		1,000	1,000	(820)	(180)	-	-	-	-
Shinhan-Neoplux Energy Newbiz Fund Stassets-DA Value		4,200	1,400	2,800	-	(226)	-	-	3,974
Healthcare Fund I		1,000		1,000	-	(15)	_	_	985
		110,136	100,336	7,848	7,169	(977)	(1,861)	(2,773)	109,742

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

14. <u>Investments in associates (continued)</u>

- (b) Changes in investments in associates for the years ended December 31, 2019 and 2018 were as follows: (continued)
- (*1) Redemption represents disposal amounts by reclassification without any cash flows.
- (c) Condensed financial statements of associates as of December 31, 2019 and 2018 were as follows:

December	31,	2019
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	_			Dece	illoci 51, 2019		
Associates	_	Assets	Liabilities	Operating revenue	Profit (loss) for the year	Other comprehensive income (loss)	Total comprehensive income (loss)
BNP Paribas Cardif Life	_						
Insurance Co., Ltd.	₩	3,896,875	3,545,682	37,067	(3,919)	24,402	20,483
KOREA FINANCE							
SECURITY		32,079	10,386	64,964	(1,297)	-	(1,297)
DAEGY Electrical							
Construction Co., Ltd.		590	193	-	-	-	-
DOODOO LOGITECH		37	12	115	(133)	-	(133)
Neoplux Technology							
Valuation Investment Fund		49,890	738	3,953	(2,078)	-	(2,078)
Partners 4th Growth							
Investment Fund		60,775	1,106	14	(1,904)	-	(1,904)
KTB Newlake Global		,	,		() /		· · · · · · · · · · · · · · · · · · ·
Healthcare PEF		37,187	151	387	(349)	_	(349)
DAEKWANG SEMICON		21,201			(- 17)		(- 12)
DUCTOR Co., Ltd.		23,507	7,358	1,248	248	_	248
Songrim Co., Ltd.		1,003	1,065	548	(39)	_	(39)
Multimedia Tech		1,000	1,000	2.0	(5)		(5)
Co., Ltd.		_	_	_	_	_	_
Hyungje art printing		866	1,130	253	(144)		(144)
MIEL Co., Ltd.		-	-,		-	_	(-11)
WON JIN HOME PLAN							
Co., Ltd.		3,845	3,268	2,945	592	262	854
IL GU FARM Co., Ltd.		565	881	14,954	77	-	77
Korea Credit Bureau		95,764	20,075	66,314	10,604	_	10,604
Goduck Gangill PFV Co.,		, , , , , ,	,,	00,000	,		,
Ltd.		351,518	346,896	_	(179)	-	(179)
SBC PFV Co., Ltd.		120,000	40,000	_	-	_	-
GMG Development Co., Ltd.		300	240	_	_	_	_
ICSF (The Korea's							
Information Center for							
Savings & Finance)		461	4	100	(4)	_	(4)
Shinhan-Albatross		.01	·	100	(.)		(.)
Technology Investment							
Fund		17,681	182	1,263	551	(917)	(366)
Miraeequity-Incus Venture		17,001	102	1,203	331	(717)	(500)
Business Fund No.4		8,143	_	3	(172)	_	(172)
Shinhan-Neoplux Energy		0,143	_	3	(172)	_	(1/2)
Newbiz Fund		33,791	18	26	(1,259)	_	(1,259)
Stassets-DA Value		33,171	10	20	(1,237)	-	(1,239)
Healthcare Fund I		2,423	1	1	(66)		(66)
Treatmente Fund I	W	4,737,300	3,979,386	194,155	529	23,747	24,276
		4,/3/,300	3,979,380	194,133	329	23,/4/	24,2/6

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

14. <u>Investments in associates (continued)</u>

(c) Condensed financial statements of associates as of December 31, 2019 and 2018 were as follows: (continued)

		December 31, 2018					
Associates	_	Assets	Liabilities	Operating revenue	Profit (loss) for the year	Other comprehensive income (loss)	Total comprehensive income (loss)
BNP Paribas Cardif Life							
Insurance Co., Ltd.	W	3,995,746	3,662,567	53,756	5,191	(10,268)	(5,077)
Daewontos Co., Ltd.		400	2,492	-	-	-	-
DAEGY Electrical							
Construction Co., Ltd.		590	193	-	-	-	-
YEONWOONG SYSTEM		492	147	-	(6)	-	(6)
DOODOO LOGITECH		204	45	536	(427)	-	(427)
Neoplux Technology							
Valuation Investment Fund		57,018	804	390	(724)	(1,969)	(2,693)
Partners 4th Growth							
Investment Fund		67,403	954	4,424	3,025	-	3,025
KTB Newlake Global							
Healthcare PEF		32,508	123	69	(793)	-	(793)
Jaeyang Industry		2,146	4,717	-	-	-	-
Tigris-Aurum Fund 1		5,142	42	-	(165)	-	(165)
DAEKWANG SEMICON							
DUCTOR Co., Ltd.		25,459	9,537	15,794	(2,341)	-	(2,341)
Songrim Co., Ltd.		2,288	2,311	1,898	(164)	-	(164)
Taihan Industrial System							
Co., Ltd.		12,317	13,478	48,457	433	-	433
Hyungje art printing		1,020	1,139	2,688	(1,171)	-	(1,171)
ICSF (The Korea's							
Information Center for							
Savings & Finance)		703	241	102	(22)	-	(22)
Shinhan-Albatross							
Technology Investment							
Fund		18,009	182	299	(435)	917	482
Miraeequity-Incus Venture							
Business Fund No.4		8,358	43	-	(171)	-	(171)
Shinhan-Neoplux Energy							
Newbiz Fund		17,347	315	19	(968)	-	(968)
Stassets-DA Value							
Healthcare Fund I		4,089	1	1	(62)	-	(62)
	W	4,251,239	3,699,331	128,433	1,200	(11,320)	(10,120)

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

14. <u>Investments in associates (continued)</u>

(d) Reconciliation of associates' financial information presented to the carrying amount of the Group's interest in the associates as of December 31, 2019 and 2018 were as follows:

	_			Decembe	r 31, 2019		
Associates		Net assets (A)	Proportion of ownership interest (B)	(A) x (B)	Unrealized income and expenses	Other adjustments	Carrying amount
BNP Paribas Cardif Life	***	251 102	1.4.000/	50 (50	(70)		52 (00
Insurance Co., Ltd.	₩	351,193	14.99%	52,679	(79)	-	52,600
KOREA FINANCE SECURITY		21,693	14.91%	3,235	-	-	3,235
DAEGY Electrical Construction		20-	2= 4=0/	400			100
Co., Ltd.		397	27.45%	109	-	-	109
DOODOO LOGITECH		25	27.96%	7	-	-	7
Neoplux Technology Valuation		10.1.70	22.224	4 < 20 4			46004
Investment Fund		49,152	33.33%	16,384	-	-	16,384
Partners 4th Growth Investment		•0.660	27.000/	44045			4404=
Fund		59,669	25.00%	14,917	-	-	14,917
KTB Newlake Global Healthcare		27.026	20.000/	7 400		112	7.501
PEF (*1)		37,036	20.00%	7,408	-	113	7,521
DAEKWANG SEMICON		16 170	20.040/	2 207			2 207
DUCTOR Co., Ltd.		16,179	20.94%	3,387	-	- 22	3,387
Songrim Co., Ltd. (*2)		(62)	35.34%	(22)	-	22	-
Multimedia Tech		00	21.060/	10			10
Co., Ltd.		89	21.06%	19	-	-	19
Hyungje art printing (*2)		(264)	31.54%	(83)	-	83	-
MIEL Co., Ltd.		(119)	28.77%	(34)	-	34	-
WON JIN HOME PLAN Co.,		55.6	21 (00/	102			102
Ltd.		576	31.69%	183	-	-	183
IL GU FARM Co., Ltd. (*2)		(316)	28.47%	(90)	-	90	-
Korea Credit Bureau		75,689	4.50%	3,406	-	-	3,406
Goduck Gangill PFV Co., Ltd.		4,622	1.04%	48	-	-	48
SBC PFV Co., Ltd.		80,000	12.50%	10,000	-	-	10,000
GMG Development Co., Ltd.		60	5.00%	3	-	-	3
ICSF (The Korea's Information							
Center for Savings & Finance)		457	32.26%	148	-	-	148
Shinhan-Albatross Technology							
Investment Fund		17,499	33.33%	5,832	-	-	5,832
Miraeequity-Incus Venture			/				
Business Fund No.4		8,143	23.53%	1,916	-	-	1,916
Shinhan-Neoplux Energy Newbiz							
Fund		33,773	23.33%	7,880	-	-	7,880
Stassets-DA Value Healthcare		2.422	24.160/	50.4			504
Fund I		2,423	24.10%	584			584
	₩ =	757,914		127,916	(79)	342	128,179

^(*1) Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable assets and liabilities on acquisition of the investment.

^(*2) Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable net assets on acquisition of the investment as well as the unrecognized share of accumulated losses resulting from the Group's discontinuing the use of equity method since its interest was reduced to zero by the accumulated losses of the investee.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

14. <u>Investments in associates (continued)</u>

(d) Reconciliation of associates' financial information presented to the carrying amount of the Group's interest in the associates as of December 31, 2019 and 2018 were as follows: (continued)

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	_			Decembe	r 31, 2018		
		Net assets	Proportion of ownership interest	(A) (B)	Unrealized income and	Other	Carrying
Associates		(A)	(B)	(A) x (B)	expenses	adjustments	amount
BNP Paribas Cardif Life	***	222 170	1.4.000/	40.055	(126)		40.041
Insurance Co., Ltd.	₩	333,178	14.99%	49,977	(136)	7.60	49,841
Daewontos Co., Ltd. (*1)		(2,092)	36.33%	(760)	-	760	-
DAEGY Electrical Construction		207	27.450/	100			100
Co., Ltd.		397	27.45%	109	-	-	109
YEONWOONG SYSTEM		345	21.77%	76	-	-	76
DOODOO LOGITECH		158	27.96%	44	-	-	44
Neoplux Technology Valuation			22.220/	40.700			40.720
Investment Fund		56,214	33.33%	18,738	-	-	18,738
Partners 4th Growth Investment		66.440	27.000/	16610			14410
Fund		66,449	25.00%	16,612	-	-	16,612
KTB Newlake Global							
Healthcare PEF (*2)		32,385	20.00%	6,477	-	113	6,590
Jaeyang Industry (*3)		(2,571)	25.90%	(666)	-	666	- -
Tigris-Aurum Fund 1		5,101	27.27%	1,391	-	-	1,391
DAEKWANG SEMICON							
DUCTOR Co., Ltd.		15,922	20.94%	3,334	-	-	3,334
Songrim Co., Ltd. (*3)		(23)	35.34%	(8)	-	8	-
Taihan Industrial System							
Co., Ltd. (*2)		(1,161)	28.29%	(328)	-	328	-
Hyungje art printing (*3)		(119)	31.54%	(38)	-	38	-
ICSF (The Korea's Information							
Center for Savings & Finance)		462	32.26%	149	-	-	149
Shinhan-Albatross Technology							
Investment Fund		17,827	33.33%	5,942	-	-	5,942
Miraeequity-Incus Venture							
Business Fund No.4		8,316	23.53%	1,957	-	-	1,957
Shinhan-Neoplux Energy							
Newbiz Fund		17,032	23.33%	3,974	-	-	3,974
Stassets-DA Value Healthcare							
Fund I		4,089	24.10%	985			985
	W	551,909	· -	107,965	(136)	1,913	109,742

^(*1) Other adjustments represent the unrecognized share of accumulated losses resulting from the Group's discontinuing the use of equity method since its interest was reduced to zero by the accumulated losses of the investee.

^(*2) Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable assets and liabilities on acquisition of the investment.

^(*3) Other adjustments represent the difference between the cost of the investment and the Group's share in the net fair value of the investee's identifiable net assets on acquisition of the investment as well as the unrecognized share of accumulated losses resulting from the Group's discontinuing the use of equity method since its interest was reduced to zero by the accumulated losses of the investee.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

14. <u>Investments in associates (continued)</u>

(e) The unrecognized equity method losses and accumulated unrecognized equity losses for the years ended December 31, 2019 and 2018 were as follows:

		2019				
		Unrecognized	Accumulated unrecognized equity			
		equity method loss	method loss			
Songrim Co., Ltd.	₩	(14)	(22)			
Hyungje Art Printing		(45)	(83)			
MIEL Co., Ltd.		(34)	(34)			
IL GU FARM Co., Ltd.		(90)	(90)			
	W	(183)	(229)			
		20	018			
		Unrecognized	Accumulated unrecognized equity			
		equity method loss	method loss			
Daewontos Co., Ltd.	₩	-	(760)			
Jaeyang industry Co., Ltd.		-	(18)			
Songrim Co., Ltd.		(8)	(8)			
Hyungje art printing		(38)	(38)			
Total						

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

15. <u>Investment properties</u>

(a) Investment properties as of December 31, 2019 and 2018 were as follows:

			December 31, 2019			
	_	Accumulated				
		Acquisition cost	depreciation	Book value		
Land	₩ [−]	488,845	-	488,845		
Buildings		226,519	(79,844)	146,675		
	\mathbf{w}^{-}	715,364	(79,844)	635,520		
			December 31, 2018			
			Accumulated			
		Acquisition cost	depreciation	Book value		
Land	₩_	417,994	-	417,994		
Buildings		222,848	(69,549)	153,299		
	W	640,842	(69,549)	571,293		

(b) Fair value of investment properties as of December 31, 2019 and 2018 were as follows:

	_	December 31, 2019	December 31, 2018
Investment properties (*1)	w	635,406	605,107

^(*1) Fair value of investment properties is estimated based on the recent market transactions and certain significant unobservable inputs. Accordingly, fair value of investment properties is classified as level 3.

(c) Income and expenses on investment properties for the years ended December 31, 2019 and 2018 were as follows

		2019	2018
Rental income	W	27,859	27,559
Direct operating expenses for investment properties that			
generate rental income		5,604	5,736

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

16. Other assets

Other assets as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Unsettled trades and accounts receivable	W	6,826,245	5,865,729
Domestic exchange settlement receivables		4,207,371	5,992,383
Guarantee deposits		1,010,755	1,020,548
Accrued income		1,436,563	1,290,791
Prepaid expense		93,458	104,076
Suspense payments		67,526	69,600
Sundry assets		138,853	125,668
Others		4,757	2,799
Present value discount		(33,431)	(36,355)
Allowance for impairment		(17,679)	(25,612)
	W	13,734,418	14,409,627

17. Non-current assets held for sale

(a) Non-current assets held for sale as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Property and equipment	W	11,853	7,561

The Group classified property and equipment which were highly expected to be sold within one year from December 31, 2019, as non-current assets held for sale.

(b) The cumulative income or loss recognized in other comprehensive income

There were no cumulative income or loss recognized in other comprehensive income relating to non-current assets held for sale as of December 31, 2019 and 2018.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

18. Pledged assets

(a) Assets pledged as collateral as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Loans:			
Loans at amortized cost	₩	128,163	129,210
Securities (*1):			
Securities at FVOCI		364,490	411,371
Securities at amortized cost		12,598,566	10,565,279
		12,963,056	10,976,650
Property and equipment (*2)		5,030	5,784
	W	13,096,249	11,111,644

^(*1) The carrying amounts of assets pledged as collateral that the transferees had the right to sell or repledge regardless of the Group's default as of December 31, 2019 and 2018 were \text{\$\text{\$\psi}\$455,865 million and \text{\$\psi}\$684,013 million, respectively.

(b) The fair value of collateral held that the Group has the right to sell or repledge regardless of pledger's default as of December 31, 2019 and 2018 were as follows:

		December	31, 2019	December 31, 2018		
	_		Collateral sold or		Collateral sold or	
		Collateral held	repledged	Collateral held	repledged	
Securities	W	2,007,036	-	5,190,387	-	

^(*2) The amounts were based on the notification amount of pledge.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

19. Deposits

Deposits as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Demand deposits:			
Korean won	W	101,691,275	92,939,482
Foreign currencies		13,525,062	12,058,823
		115,216,337	104,998,305
Time deposits:			
Korean won		135,445,356	119,544,345
Foreign currencies		18,605,817	16,109,446
Gain on fair value hedge		(102,493)	(167,226)
		153,948,680	135,486,565
Negotiable certificates of deposits		9,694,816	9,213,652
Note discount deposits		4,747,587	4,087,530
CMA		3,987,372	4,084,709
Others		20,477	21,963
	W	287,615,269	257,892,724

20. Financial liabilities at fair value through profit or loss

(a) Financial liabilities at FVTPL as of December 31, 2019 and 2018 were as follows:

	December 31, 2019			December 31, 2018		
	Interest rate (%)		Amount	Interest rate (%)		Amount
Securities sold: Debt securities	1.25		39,909	2.75	— ₩	20,223
Equity securities	-	***	411	2.13 -	-71-	402
Gold/silver deposits	-		467,761	-		458,934
		W	508,081		W	479,559

(b) Net gain (loss) on financial liabilities at FVTPL for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Securities sold:			
Gain on sale	₩	285	231
Loss on sale		(202)	(384)
Gain on valuation		- -	27
Loss on valuation		(77)	(28)
		6	(154)
Gold/silver deposits:			<u> </u>
Gain on sale		4,644	1,611
Loss on sale		(475)	(217)
Gain on valuation		· · · · · · · · · · · · · · · · · · ·	293
Loss on valuation		(91,025)	(15,185)
		(86,856)	(13,498)
	W	(86,850)	(13,652)

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

21. Borrowings

Borrowings as of December 31, 2019 and 2018 were as follows:

	December 31, 2019			December 31, 2018		
	Interest		_	Interest		_
	rate (%)		Amount	rate (%)		Amount
Call money:						_
Korean won	0.00	W	-	1.73	W	120,000
Foreign currencies	$0.00 \sim 5.25$		538,247	$0.00 \sim 6.85$		840,162
		=	538,247		-	960,162
Bill sold	0.80~1.60		19,070	0.75~1.70		14,536
Bonds sold under repurchase						
agreements:						
Korean won	1.31		958	1.82		1,027
Foreign currencies	2.28~5.40		102,531	2.63~6.50		82,001
		_	103,489		-	83,028
Borrowings in Korean won:		_			-	
Borrowings from Bank of Korea	$0.50 \sim 0.75$		2,386,939	$0.50 \sim 0.75$		2,288,991
Others	$0.00 \sim 4.30$		6,149,615	$0.00 \sim 4.25$		6,561,883
		_	8,536,554		-	8,850,874
Borrowings in foreign currencies:					-	
Overdraft due to banks	0.00		86,791	0.00		77,673
Borrowings from banks	$0.00 \sim 7.50$		6,456,429	$0.00 \sim 9.20$		4,576,198
Sub-lease	0.00		9,856	$0.00 \sim 3.34$		84,017
Others	1.94~7.35	_	1,576,459	$2.60 \sim 7.90$	_	1,510,190
			8,129,535		_	6,248,078
Deferred origination costs		_	(1,011)		-	(1,857)
		W	17,325,884		W	16,154,821

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

22. <u>Debt securities issued</u>

Debt securities issued as of December 31, 2019 and 2018 were as follows:

	December 31, 2019			December 31, 2018		
	Interest			Interest		
	rate (%)		Amount	rate (%)		Amount
Debt securities issued in Korean won:						
Debt securities issued	$0.71 \sim 8.00$	W	28,155,393	$0.00 \sim 8.00$	W	23,425,572
Subordinated debt securities issued	2.20~4.60		3,200,145	2.20~4.60		3,200,145
Gain on fair value hedges			(87,692)			(206,985)
Discount on debt securities issued			(40,736)			(62,944)
		_	31,227,110		_	26,355,788
Debt securities issued in foreign currencies:		_			_	
Debt securities issued	0.01~4.01		3,882,419	0.02~4.01		3,356,032
Subordinated debt securities issued	3.75~5.00		2,813,406	3.75~5.00		2,271,799
Gain on fair value hedges			141,264			(55,251)
Discount on debt securities issued			(34,331)			(29,102)
		_	6,802,758		_	5,543,478
		W	38,029,868		W	31,899,266

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

23. Defined benefit liabilities (assets)

(a) Defined benefit plan assets and liabilities

The Group provides a defined benefit plan for qualified employees. Plan assets are managed by trust companies, funds, and other similar companies that are subject to local regulations and each country's business environment.

Defined benefit plan assets and liabilities as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Present value of defined benefit obligations	W	1,502,153	1,370,151
Fair value of plan assets		(1,445,985)	(1,299,502)
Net defined benefit liabilities	W	56,168	70,649

(b) Changes in the present value of defined benefit obligations for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Beginning balance	W	1,370,151	1,263,699
Current service cost		127,273	104,538
Interest expense		42,507	44,471
Remeasurements (*1)(*2)		21,637	65,504
Effects of foreign currency movements		423	(853)
Benefits paid by the plan		(61,050)	(106,995)
Others		1,212	(213)
Ending balance	<u> </u>	1,502,153	1,370,151

- (*1) Remeasurements for the years ended December 31, 2019 consist of \text{\$\psi\$16,048 million of actuarial gain arising from changes in demographic assumptions, \text{\$\psi\$40,882 million of actuarial loss arising from changes in financial assumptions and \text{\$\psi\$3,197 million of actuarial gain arising from changes in experience adjustments, respectively.}
- (*2) Remeasurements for the years ended December 31, 2019 consist of \text{\psi}18,399 million of actuarial loss arising from changes in demographic assumptions, \text{\psi}54,933 million of actuarial loss arising from changes in financial assumptions and \text{\psi}7,828 million of actuarial gain arising from changes in experience adjustments, respectively.
- (c) Changes in the fair value of plan assets for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Beginning balance	Ψ	1,299,502	1,294,013
Interest income		41,324	50,725
Remeasurements		(16,618)	(31,570)
Contributions paid into the plan		180,000	92,000
Benefits paid by the plan		(58,223)	(105,666)
Ending balance	₩	1,445,985	1,299,502

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

23. <u>Defined benefit liabilities (assets) (continued)</u>

(d) The amount of major categories of the fair value of plan assets as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Deposits	₩	1,406,932	1,281,069
Others		39,053	18,433
	₩	1,445,985	1,299,502

(e) Actuarial assumptions as of December 31, 2019 and 2018 were as follows:

	December 31, 2019	December 31, 2018	Descriptions
Discount rate Future salary	2.92%	3.18%	AA0 Corporate bond yields
increasing rate	2.33% + Promotion rate	2.33% + Promotion rate	Average for last 5 years

(f) Sensitivity analysis

Sensitivity analysis of the present value fluctuations of defined benefit obligations as of December 31, 2019 and 2018 were as follows:

		December 31, 2019				
		Change in present value when the factor rises by 100 basis points	Change in present value when the factor falls by 100 basis points			
Discount rate	W	(149,945)	175,555			
Future salary increasing rate	**	174,804	(151,611)			
		December	r 31, 2018			
		Change in present value when the factor rises	Change in present value when the factor falls			
		by 100 basis points	by 100 basis points			
Discount rate	W	(121,918)	140,734			
Future salary increasing rate		137,918	(120,557)			

(g) The maturity analysis of undiscounted retirement benefit payments for the years ended December 31, 2019 and 2018 were as follows:

_	December 31, 2019					
-	1 year or less	1 year~ 2 years or less	2 years~ 5 years or less	5 years~ 10 years or less	More than 10 years	Total
Salary payment amount W	32,759	62,556	207,240	428,824	1,391,820	2,123,199
<u>-</u>	December 31, 2018					
		1 year~	2 years~	5 years~		
	1 year	2 years	5 years	10 years	More than	
	or less	or less	or less	or less	10 years	Total
Salary payment amount W	58,231	80,625	277,853	395,171	1,094,529	1,906,409

(h) The weighted average durations of defined benefit obligations as of December 31, 2019 and 2018 were 11.1 years and 9.9 years, respectively.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

24. Provisions

(a) Changes in provisions for unused credit commitments and financial guarantee contracts issued for the years ended December 31, 2019 and 2018 were as follows:

					2019			
		Loan commitments and						
		other l	iabilities for o	credit	Financ	ial guarantee c	ontracts	
			Lifet	ime		Lifet	ime	
			expected cr	edit losses		expected cr	edit losses	
		12-month	Credit-	Credit-	12-month	Credit-	Credit-	
		expected	unimpaired	impaired	expected	unimpaired	impaired	
		credit	financial	financial	credit	financial	financial	
		losses	asset	asset	losses	asset	asset	Total
Beginning balance	W	66,807	16,322	_	54,428	5,887	1,757	145,201
Transfer to 12-month expected credit		,	,		,	,	,	,
losses		2,246	(2,246)	-	2,629	(2,629)	-	-
Transfer to lifetime expected credit			, , ,					
losses		(2,319)	2,319	-	(1,245)	1,245	-	-
Transfer to impaired								
financial asset		(2)	-	2	(12)	-	12	-
Provision (reversal)		(1,808)	4,356	4	947	96	(943)	2,652
Foreign exchange		(, , ,					,	,
movements		912	121	_	1,303	323	102	2,761
Others (*1)			=	=	1,083	633	(117)	1,599
Ending balance	W	65,836	20,872	6	59,133	5,555	811	152,213

^(*1) Other changes were mainly due to newly issued financial guarantee contracts recognized at their fair values, termination, effect of discount rate changes, etc.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

24. Provisions (continued)

(a) Changes in provisions for unused credit commitments and financial guarantee contracts issued for the years ended December 31, 2019 and 2018 were as follows:

					2018			
	-	Loan	commitments	and				
		other l	iabilities for o	credit	Financi	ial guarantee c	contracts	
	-		Lifetime e	expected		Lifetime	expected	
			credit l	osses		credit	losses	
		12-month	Credit-	Credit-	12-month	Credit-	Credit-	
		expected	unimpaired	impaired	expected	unimpaired	impaired	
		credit	financial	financial	credit	financial	financial	
		losses	asset	asset	losses	asset	asset	Total
Beginning balance	₩	69,350	17,341	-	30,338	3,346	2,464	122,839
Transfer to 12-month expected credit								
losses		2,929	(2,929)	-	1,139	(1,139)	-	-
Transfer to lifetime expected credit								
losses		(2,605)	2,605	-	(1,804)	1,804	-	-
Transfer to impaired financial asset		_	_	_	(13)	_	13	_
Provision (reversal)		(3,586)	(800)		(3,226)	455	(690)	(7,847)
Foreign exchange		(3,380)	(800)	-	(3,220)	433	(090)	(7,047)
movements		719	105	-	757	481	449	2,511
Others (*1)		-			27,237	940	(479)	27,698
Ending balance	W	66,807	16,322		54,428	5,887	1,757	145,201

^(*1) Other changes were mainly due to newly issued financial guarantee contracts recognized at their fair values, termination, effect of discount rate changes, etc.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

24. Provisions (continued)

(b) Changes in provisions for the years ended December 31, 2019 and 2018 were as follows:

				2019		
	_			Non-financial		_
		Asset		guarantee		
	_	retirement	Litigation	contracts	Others	Total
Beginning balance	W	36,770	5,773	43,471	53,501	139,515
Provision (reversal)		777	122	(19,329)	(2,417)	(20,847)
Provision used		(739)	-	-	(7,679)	(8,418)
Foreign exchange						
movements		-	-	1,420	382	1,802
Others (*1)	_	2,281		24	2,495	4,800
Ending balance	W	39,089	5,895	25,586	46,282	116,852
· /	W		5,895			

(*1) Other changes were mainly due to the effect of discount rate changes, etc.

				2018		
	•			Non-financial		
		Asset		guarantee		
		retirement	Litigation	contracts	Others	Total
Beginning balance	₩	30,874	11,850	46,340	43,567	132,631
Provision (reversal)		6,474	(971)	(2,833)	3,583	6,253
Provision used		(2,388)	(5,492)	-	(6,467)	(14,347)
Foreign exchange						
movements		-	386	1,677	(1,006)	1,057
Others (*1)		1,810		(1,713)	13,824	13,921
Ending balance	W	36,770	5,773	43,471	53,501	139,515
	=		2 41			

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^(*1) Other changes were mainly due to the effect of discount rate change, etc.

⁽c) Asset retirement obligation liabilities represent the estimated cost to restore the existing leased properties which were discounted to the present value using the appropriate discount rate at the end of the reporting period. Disbursements of such costs were expected to incur at the end of the lease contract. Such costs were reasonably estimated using the average lease period and the average restoration expenses. The average lease period was calculated based on the past ten-year historical data of the expired leases. The average restoration expense was calculated based on the actual costs incurred for the past three years using the three-year average inflation rate.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

25. Other liabilities

Other liabilities as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Accounts payable	W	7,312,827	5,847,048
Borrowing from trust account		5,343,259	2,994,798
Accrued expenses		2,766,333	2,631,797
Liability incurred by agency relationship		1,609,675	1,306,075
Domestic exchange settlement payable		1,330,499	1,016,256
Lease liabilities (*1)		460,938	-
Account for agency business of other institutions		733,345	720,171
Guarantee deposits received		384,552	355,867
Foreign exchange settlement payables		242,643	225,921
Suspense payable		58,788	73,426
Unearned income		95,900	96,975
Withholding value-added tax and other taxes		123,640	119,190
Dividend payable		-	2,597
Sundry liabilities		65,774	46,845
Present value discount	_	(25,109)	(2,118)
	₩ _	20,503,064	15,434,848

^(*1) As of December 31, 2019, the Group recognizes lease liabilities as other liabilities, and the expenses for variable lease payments that are not included in the measurement of lease liabilities were \text{\psi}189 million, cash outflows from lease liabilities were \text{\psi}208,436 million, and interest on lease liabilities were \text{\psi}7,845 million.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

26. Equity

(a) Equity as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Capital stock:	_		
Common stock	₩	7,928,078	7,928,078
Other equity instruments:			
Hybrid bonds		997,987	698,660
Capital surplus:			
Share premium		398,080	398,080
Other capital surplus		5,084	5,084
	_	403,164	403,164
Capital adjustments:	_		
Stock options		789	4,850
Others		(3,269)	(4,204)
	_	(2,480)	646
Accumulated other comprehensive income (loss):	_	<u> </u>	
Net change in fair value of financial assets at FVOCI		109,734	(21,118)
Share of other comprehensive income of associates,			· · · · /
net		8,163	4,859
Foreign currency translation differences for foreign		·	
operations		(215,780)	(313,003)
Remeasurements of defined benefit plans		(305,148)	(277,435)
•	_	(403,031)	(606,697)
Retained earnings:	_		
Legal reserve (*1)		2,047,515	1,835,854
Voluntary reserve (*2)		11,815,146	10,930,547
Other reserve (*3)		123,197	112,058
Unappropriated retained earnings (*4)		3,177,137	2,884,292
	_	17,162,995	15,762,751
Non-controlling interests		6,402	5,937
The commonly inverses	W	26,093,115	24,192,539
	-	20,079,119	21,172,337

- (*1) According to the Article 40 of the Banking Act, the Bank is required to appropriate an amount equal to a minimum of 10% of cash dividends paid for each accounting period as a legal reserve, until such reserve equals 100% of issued capital. The legal reserve is only available to reduce accumulated deficit or transfer to capital stock.
- (*2) The amounts include regulatory reserve for loan loss based on separate financial statements of \Impu1,961,499 million and \Impu1,842,655 million as of December 31, 2019 and 2018, respectively. The amounts also include asset revaluation surplus of \Impu355,898 million as of both December 31, 2019 and 2018, respectively.
- (*3) Other reserve was established according to the laws applicable to some oversea branches and it may be used only to reduce their deficit.
- (*4) The amounts include difference between the regulatory reserve for loan loss based on separate financial statement and the regulatory reserve for loan loss based on consolidated financial statement of \(\pi\)7,165 million and \(\pi\)5,601 million as of December 31, 2019 and 2018, respectively. Provision for regulatory reserve for loan losses are \(\pi\)226,970 million and \(\pi\)113,243 million for the years ended December 31, 2019 and 2018, respectively.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

26. Equity (continued)

(b) Capital stock

Capital stock of the Bank as of December 31, 2019 and 2018 were as follows:

	December 31, 2019	December 31, 2018
Number of authorized shares	2,000,000,000 shares	2,000,000,000 shares
Par value per share in won	W 5,000	W 5,000
Number of issued shares outstanding	1,585,615,506 shares	1,585,615,506 shares

(c) Hybrid bonds

Hybrid bonds as of December 31, 2019 and 2018 were as follows:

			Book va		
		_	December 31,	December 31,	Interest
Date of issuance	Date of maturity		2019	2018	rate (%)
Hybrid bonds issued in				_	
Korean won:					
June 7, 2013	June 7, 2043	W	299,568	299,568	4.63
June 29, 2017	Perpetual bond		129,701	129,701	3.33
June 29, 2017	Perpetual bond		69,844	69,844	3.81
October 15, 2018	Perpetual bond		199,547	199,547	3.70
February 25, 2019	Perpetual bond		299,327	-	3.30
		W	997,987	698,660	
Dividends on hybrid bond hole	ders	₩	33,115	25,228	
Weighted average interest rate	(%)		3.73	4.36	

The above hybrid bonds are subject to early redemption option after five years or ten years from the date of issuance, and the maturity can be extended under the same condition at the maturity date by the issuer. In addition, if no dividend is paid for common shares, the agreed interest is also not paid.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

26. Equity (continued)

(d) Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2019 and 2018 were as follows:

2019

		Items that are or may be reclassified to profit or loss Items that will not be reclassified to profit or loss						
		Net change in fair value of financial assets at FVOCI	Share of other comprehensive income (loss) of associates, net	Foreign currency translation differences for foreign operations	Net change in fair value of financial assets at FVOCI	Share of other comprehensive income (loss) of associates, net	Remeasurements of the defined benefit plans	Total
Beginning balance	W	24,966	4,859	(313,003)	(46,084)	-	(277,435)	(606,697)
Change due to fair value		157,276	-	-	26,622	-	-	183,898
Change due to other comprehensive income of associates			3,357					3,357
Change due to impairment		560	-	-	_	-	-	560
Change due to disposal		(18,553)	-	-	-	-	_	(18,553)
Effect of hedge accounting		(731)	-	(49,463)	-	-	-	(50,194)
Effect of foreign currency movements		-	-	140,002	293	-	-	140,295
Remeasurements of defined benefit plans		-	-	-	-	-	(38,255)	(38,255)
Amounts transferred to		-	-	-	(7,804)	-	-	(7,804)
retained earnings Effect of tax		(21,558)	(52)	6,684	(5,254)	-	10,542	(9,638)
Ending balance	₩	141,960	8,164	(215,780)	(32,227)	-	(305,148)	(403,031)

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

26. Equity (continued)

(d) Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2019 and 2018 were as follows: (continued)

2018

		Items that are or may be reclassified to profit or loss Items that will not be reclassified to profit or loss						
		tiems that are or	Share of other	Foreign currency	Items that will	Share of other	TOTAL OF IOSS	
		Net change in fair value of financial assets at	comprehensive income (loss) of	translation differences for	Net change in fair value of financial assets at		Remeasurements of the defined benefit	
		FVOCI	associates, net	foreign operations	FVOCI	net	plans	Total
Beginning balance	W	(70,683)	6,614	(334,281)	(58,379)	(28)	(207,036)	(663,793)
Change due to fair value		135,350	-	-	21,151	-	-	156,501
Change due to other comprehensive income of associates		-	(1,579)	-	-	25	-	(1,554)
Change due to impairment		3,467	_	_	_	-	_	3,467
Change due to disposal		11,910	(286)	-	-	-	-	11,624
Effect of hedge accounting		(2,365)	-	(35,879)	-	-	-	(38,244)
Effect of foreign currency movements		-	-	47,227	423	-	-	47,650
Remeasurements of defined benefit plans		-	-	-	-	-	(97,076)	(97,076)
Amounts transferred to		-	-	-	(4,399)	13	-	(4,386)
retained earnings Effect of tax		(52,713)	110	9,930	(4,880)	(10)	26,677	(20,886)
Ending balance	₩	24,966	4,859	(313,003)	(46,084)	-	(277,435)	(606,697)

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won, except for par value per share and dividend per share)

26. Equity (continued)

(e) Statements of appropriation of retained earnings for the years ended December 31, 2019 and 2018 were as follows:

	2019	2018
	Expected date of approval: March 25, 2020	Date of approval: March 26, 2019
Unappropriated retained earnings:		
Balance at beginning of year \w	-	-
Net effect on change due to accounting		(00.616)
policy Transfer from other comprehensive	-	(90,616)
income through the sale of securities at		
FVOCI	(5,658)	(3,189)
Interest on hybrid bond	(33,115)	(25,228)
Profit for the year	2,071,235	2,116,606
•	2,032,462	1,997,573
Transfer from reserves:		
Voluntary reserve	9,218,897	8,453,145
	11,251,359	10,450,718
Appropriation of retained earnings:		
Legal reserve	207,124	211,661
Regulatory reserve for loan loss	234,135	118,844
Other reserve	11,827	11,139
Voluntary reserves	9,908,273	9,218,899
Loss on redemption of hybrid bond	-	175
Dividends on common stock	890,000	890,000
(Dividend per share in won:		
2019 W 561.30 (11.23%)		
2018 ₩561.30 (11.23%)		10.450.510
The management of material and a second as the	11,251,359	10,450,718
Unappropriated retained earnings to be carried over to subsequent year \times	_	_
carried over to subsequent year		

These statements of appropriation of retained earnings were based on the separate financial statements of the Bank.

(f) Dividends

Dividends of common stock for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Number of issued shares outstanding		1,585,615,506	1,585,615,506
Par value per share in won	₩	5,000	5,000
Dividend rate per share		11.23%	11.23%
Dividend per share in won	₩	561.30	561.30

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Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won, except for earnings per share)

26. Equity (continued)

(g) Dividends payout ratio

Dividends payout ratio for the years ended December 31, 2019 and 2018 were as follows:

	2019		2018	
Dividends	W	890,000	890,000	
Profit for the year (*1)		2,329,192	2,279,049	
Dividends payout ratio to profit for the year		38.21%	39.05%	
Profit for the year adjusted for regulatory reserve (*1)		2,102,222	1,962,108	
Dividends payout ratio to profit for the year adjusted for				
regulatory reserve for loan loss		42.34%	45.36%	

^(*1) Profit for the year and profit for the year adjusted for regulatory reserve for loan loss were the amount attributable to equity holder of the Bank.

27. Regulatory reserve for loan loss

The Group should calculate and disclose regulatory reserve for loan loss, in accordance with *the Article 29-1 and 29-2 of Regulation on Supervision of Banking Business*.

(a) The regulatory reserve for loan loss as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Regulatory reserve for loan loss	W	2,015,891	1,902,648
Provision for regulatory reserve for loan loss		226,970	113,243
	W	2,242,861	2,015,891

(b) Profit for the year adjusted for regulatory reserve for loan loss and earnings per share adjusted for regulatory reserve for loan loss for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Provision for regulatory reserve for loan loss (*1)	W	226,970	316,941
Profit for the year adjusted for regulatory reserve for loan loss (*2)		2,102,298	1,962,421
Earnings per share adjusted for regulatory reserve in won		1,305	1,222

^(*1) The amount for the year ended December 31, 2018 was calculated based on the regulatory reserve for loan loss that retroactively reflects the effect of adoption of K-IFRS No.1109.

^(*2) The adjusted reserve which reflects abovementioned loan loss is not based on K-IFRS and is calculated by assuming that the provisions of loan loss before income tax effects are reflected in net income.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

28. Net interest income

(a) Net interest income for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Interest income:		-	_
Cash and due from banks	\mathbf{w}	124,921	106,633
Securities at FVTPL		290,274	221,569
Securities at FVOCI		716,464	607,771
Securities at amortized cost		466,706	403,707
Loans (*1)		8,989,109	8,197,418
Others		67,258	59,627
		10,654,732	9,596,725
Interest expense: (*2)			
Deposits		(3,542,038)	(3,007,294)
Borrowings		(301,998)	(292,048)
Debt securities issued		(852,328)	(640,708)
Others		(86,581)	(70,681)
		(4,782,945)	(4,010,731)
Net interest income	<u> </u>	5,871,787	5,585,994

^(*1) The amounts include an interest income from loans at FVTPL of \\ \Psi 16,254 \text{ million and } \\ \Psi 12,462 \text{ million for the years ended December 31, 2019 and 2018.}

(b) Interest income recognized on impaired financial assets year ended December 31, 2019 and 2018 were as follows:

 2019
 2018

 Interest income:
 ₩
 17,560
 15,086

^(*2) There were no interest expense from financial liabilities at FVTPL for the years ended December 31, 2019 and 2018.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

29. Net fees and commission income

Net fees and commission income for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Fees and commission income:			
Credit placement fees	W	60,131	54,672
Commission received as electronic charge receipt		151,196	145,874
Brokerage fees		109,307	97,928
Commission received as agency		305,712	323,796
Investment banking fees		107,370	71,095
Commission received in foreign exchange activities		196,302	189,017
Asset management fees from trust accounts		238,246	192,422
Guarantee fees		78,642	69,729
Others		120,641	113,219
		1,367,547	1,257,752
Fees and commission expense:			_
Credit-related fees		(39,011)	(35,006)
Brand-related fees		(35,530)	(34,769)
Service-related fees		(33,105)	(25,748)
Trading and brokerage fees		(9,640)	(9,430)
Commission paid in foreign exchange activities		(46,618)	(38,722)
Others		(86,251)	(77,544)
		(250,155)	(221,219)
Net fees and commission income	W	1,117,392	1,036,533

30. Dividend income

Dividend income for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Securities at FVTPL	₩	2,820	3,905
Securities at FVOCI		12,135	11,757
	W	14,955	15,662

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

31. Gain and loss on financial instruments at fair value through profit or loss

Gain and loss on financial instruments at FVTPL for the years ended December 31, 2019 and 2018 were as follows:

Financial instruments at FVTPL Debt:		
Debt:		
Gain on valuation of debt securities \\ \psi\	81,904	101,439
Gain on sale of debt securities	83,398	52,642
Loss on valuation of debt securities	(54,147)	(38,178)
Loss on sale of debt securities	(47,017)	(44,726)
Others	100,005	71,308
Others	164,143	142,485
Equity:	104,143	142,463
Gain on valuation of equity securities	5,054	25,778
Gain on sale of equity securities	7,963	31,564
Loss on valuation of equity securities	(10,837)	(13,080)
Loss on sale of equity securities	(1,809)	(17,900)
Zees en suite et equity see mittee	371	26,362
Gold/silver:		20,302
Gain on valuation of gold/silver deposits	28,803	19,667
Gain on sale of gold/silver deposits	4,644	1,611
Loss on valuation of gold/silver deposits	(91,025)	(15,473)
Loss on sale of gold/silver deposits	(475)	(217)
	(58,053)	5,588
Loans at FVTPL:		·
Gain on valuation of loans	4,046	5,292
Gain on sale of loans	14,508	12,181
Loss on valuation of loans	(2,856)	(1,225)
Loss on sale of loans	(2,484)	(2,420)
	13,214	13,828
	119,675	188,263
Derivatives		
Foreign currency related:		
Gain on valuation and transaction	7,823,821	5,855,531
Loss on valuation and transaction		
Loss on valuation and transaction	(7,712,868)	(5,682,626)
Interest rates related:	110,953	172,905
Gain on valuation and transaction	524,405	453,291
Loss on valuation and transaction	(545,101)	(450,679)
Loss on variation and transaction	(20,696)	2,612
Equity related:	(20,070)	2,012
Gain on valuation and transaction	15,692	20,203
Loss on valuation and transaction	(14,724)	(10,863)
	968	9,340
Commodity related:		
Gain on valuation and transaction	34,557	5,532
Loss on valuation and transaction	(11,560)	(20,141)
	22,997	(14,609)
	114,222	170,248
Net gain on financial instruments at FVTPL W		358,511

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

32. General and administrative expenses

General and administrative expenses for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Employee benefits:			
Short and long term employee benefits	\mathbf{W}	1,774,859	1,787,842
Post-employee defined benefits		128,455	98,284
Post-employee defined contributions		418	154
Termination benefits		93,712	90,484
	<u></u>	1,997,444	1,976,764
Amortization:	<u></u>		
Depreciation		123,784	118,567
Amortization of intangible assets		44,292	43,887
Depreciation of right-of-use assets		235,785	-
		403,861	162,454
Other general and administrative expenses:	<u></u>		
Rent		53,586	283,430
Service contract expenses		256,347	252,445
Taxes and dues		100,603	84,094
Advertising		81,193	74,262
Electronic data processing expenses		53,449	58,096
Others		195,923	170,241
		741,101	922,568
	W	3,142,406	3,061,786

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won, except for fair value and share data)

33. Share-based payments

(a) Stock options granted as of December 31, 2019 were as follows:

	5th grant	6th grant	7th grant
Grant date	March 21, 2006	March 20, 2007	March 19, 2008
Exercise price in won (*1)	W 38,829	W 54,560	W 49,053
Number of shares granted	2,157,600	715,500	332,850
Contractual exercise	2017.05.18	2017.05.18	$2017.05.18 \sim 2021.05.17$
period	~ 2019.08.21	~ 2020.08.19	$2017.09.18 \sim 2021.09.17$
Changes in number of			
shares granted:			
Outstanding at			
December 31, 2018	2,500	50,513	26,233
Exercised	2,500	-	4,759
Outstanding at			
December 31, 2019 (*2)	-	50,513	21,474
F : 1 : (*2)		Wioo	Expiration date 2021.05.17 : \frac{\psi}{1},122
Fair value in won (*3)	-	₩88	Expiration date 2021.09.17 : \forall 1,301

^(*1) As of December 31, 2019, the granted shares were fully vested, and the weighted-average exercise price of 71,987 options outstanding was \(\prec{\psi}\)52,917.

(b) Equity-settled share-based payments

i) Equity-settled share-based payments as of December 31, 2019 were as follows:

	Contents		
Grant year	2010 ~ 2013	2014~	
Type (*1)	Equity-settled share-based payment	Equity-settled share-based payment	
Service period	Upon appointment and promotion since April 1, 2010	Upon appointment and promotion since January 1, 2014	
Performance conditions (*2)	(Within 3 years from grant date) Increase rate of stock price and achievement of target ROE	(Within 1 year from grant date) Increase rate of stock price and achievement of target ROE	

^(*1) The Group granted shares of Shinhan Financial Group. According to the commitment, the amount that the Group must pay to the Shinhan Financial Group was recognized in liabilities, and the difference between the amount recognized in liabilities and the compensation cost based on equity-settled share-based payments was recognized in equity.

(*2) ROE: Return on Equity

^(*2) As of December 31, 2019, 4,759 rights of exercise for 7th grant were cancelled.

^(*3) As of December 31, 2019, the fair value consists of intrinsic value and time value, and suspended grants were evaluated based on the intrinsic value, which is the difference between the closing price of Shinhan Financial Group and the exercise price.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won, except for fair value and share data)

33. Share-based payments (continued)

- (b) Equity-settled share-based payments (continued)
 - ii) Granted shares and the fair value of grant date as of December 31, 2019 were as follows:

		Fair value (*1)	
Grant date	Grant shares	(in won)	Estimated shares (*2)
January 1, 2014	109,800	47,300	2,364
January 1, 2015	156,700	44,500	2,300
March 18, 2015	16,800	42,650	13,300
May 22, 2015	5,300	42,800	3,251
January 1, 2016	221,900	39,000	213,320
January 1, 2017	221,300	45,300	189,928
January 23, 2017	2,700	45,600	2,505
March 7, 2017	17,400	46,950	14,092
March 24, 2017	8,100	49,000	6,177
June 1, 2017	2,700	49,250	1,551
July 5, 2017	2,700	49,550	1,301
July 6, 2017	2,700	49,200	2,136
January 1, 2018	227,500	49,400	212,027
January 24, 2018	-	52,700	1,106
January 1, 2019	293,806	39,600	252,849
March 26, 2019	23,410	42,750	16,579
April 1, 2019	3,696	43,750	2,560
June 1, 2019	4,731	44,450	1,020
July 4, 2019	7,392	44,450	3,370
July 8, 2019	3,696	43,650	1,648
	1,332,331		943,384

^(*1) The fair value per share was evaluated based on the closing price of Shinhan Financial Group at each grant date. As of December 31, 2019, the fair value per share data evaluated by Shinhan Financial Group amounted to \text{W43,350}.

^(*2) Grant shares at grant date were adjusted pursuant to increase rate of stock price (33.4% to 2013, 20.0% after 2014) and achievement of target ROE (66.6% to 2013, 80.0% after 2014) based on standard quantity applicable to the days of service among specified period of service, which allows for the determination of acquired quantity at the end of the operation period.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

33. Share-based payments (continued)

(c) Stock compensation costs calculated for the years ended December 31, 2019 and 2018 were as follows:

	_	2019	2018
Compensation costs recorded for the year	₩	11,245	11,209

(d) Accrued expenses of the stock compensation costs and residual compensation costs as of December 31, 2019 and 2018 were as follows:

Accrued expenses $\frac{\text{December 31, 2019}}{\text{W}}$ $\frac{\text{December 31, 2018}}{39,747}$ $\frac{36,446}{3000}$

34. Net other operating expenses

Net other operating expenses for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Other operating income		_	
Gain on sale of assets:			
Loans at amortized cost	₩	11,916	26,872
Written-off loans		1,430	13,119
		13,346	39,991
Others:			
Gain on hedge activity from hedged items		29,722	112,579
Gain on hedge activity from hedging			
instruments		410,131	166,934
Reversal of allowance for			
acceptances and guarantee		19,329	2,833
Reversal of other allowance		1,518	-
Others		6,757	32,656
		467,457	315,002
	·	480,803	354,993
Other operating expense		_	
Loss on sale of assets:			
Loans at amortized cost		(27,096)	(13,991)
Others:			
Loss on hedge activity from hedged items		(400,509)	(189,152)
Loss on hedge activity from hedging			
instruments		(35,337)	(91,178)
Provision for other allowance		-	(9,086)
Contribution to fund		(302,994)	(275,336)
Deposit insurance fee		(299,159)	(305,860)
Others		(296,760)	(155,611)
		(1,334,759)	(1,026,223)
		(1,361,855)	(1,040,214)
Net other operating expenses	W	(881,052)	(685,221)

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

35. Net non-operating income

Net non-operating income for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Non-operating income			_
Gain on sale of assets:			
Property and equipment	W	1,602	11,987
Intangible assets		5,347	50
Investment properties		-	4,707
Non-current assets held for sale		57	80
Assets not used for business purpose		-	-
		7,006	16,824
Investments in associates:			
Gain from disposition		1,124	12,991
Others:			
Rental income on investment property		27,859	27,559
Others		50,173	26,834
		78,032	54,393
		86,162	84,208
Non-operating expenses			, , , , , , , , , , , , , , , , , , ,
Loss on sale of assets:			
Property and equipment		(130)	(1,687)
Intangible assets		(5)	(21)
Investment properties		-	(1,623)
Non-current assets held for sale		_	(1,403)
		(135)	(4,734)
Investments in associates:			· · · · · · · · · · · · · · · · · · ·
Loss on disposal		(2,277)	(393)
•		(2,277)	(393)
Others:			
Investment properties depreciation		(11,004)	(10,377)
Donations		(71,859)	(59,902)
Impairment loss on intangible assets		(151,523)	-
Others		(34,994)	(26,107)
		(269,380)	(96,386)
		(271,792)	(101,513)
Net non-operating expenses	W	(185,630)	(17,305)
	• • • • • • • • • • • • • • • • • • • •	(-00,000)	(17,500)

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

36. <u>Income tax expense</u>

(a) The components of income tax expense of the Group for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Current income tax expense	W	767,958	588,655
Deferred taxes arising from changes in temporary differences		(57,852)	293,870
Deferred taxes arising from utilization of expired unused tax losses		45,633	6,947
Tax adjustment charged or credited directly to equity		(8,097)	(22,430)
Income tax expense	W	747,642	867,042

(b) The income tax expense calculated by applying statutory tax rates to the Group's taxable income differs from the actual tax expense in the consolidated statements of income for the years ended December 31, 2019 and 2018 for the following reasons:

		2019	2018
Profit before income tax	W	3,076,910	3,146,404
Statutory tax rate		27.50%	27.50%
Income tax expense at statutory tax rates		835,787	854,898
Adjustments:			
Non-taxable income		(2,889)	(30,738)
Non-deductible expense		7,093	9,620
Decrease resulting from consolidated corporate			
tax system		(62,401)	(34,176)
Income tax paid (refund)		(17,763)	39,986
Others		(12,185)	27,452
Income tax expense	W	747,642	867,042
Effective tax rate		24.30%	27.56%

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

36. Income tax expense (continued)

(c) Changes in temporary differences and deferred tax assets (liabilities) for the years ended December 31, 2019 and 2018 were as follows:

	_			2019		
		Beginning Balance	Decreases	Increases	Ending balance	Deferred tax assets (liabilities) (*1)
Accrued income	W	(644,318)	(644,318)	(651,553)	(651,553)	(179,177)
Accounts receivable		(88,065)	(88,065)	(96,013)	(96,013)	(26,404)
Securities at FVTPL		93,830	72,059	74,382	96,153	26,442
Securities at FVOCI		278,317	(22,541)	132,198	433,056	119,090
Investments in associates and subsidiaries(*2) Deferred loan origination costs		(612,345)	(612,345)	(710,889)	(710,889)	(195,494)
and fees		(497,515)	(497,515)	(498,779)	(498,779)	(137,164)
Revaluation and depreciation on property and equipment		(439,598)	(15,030)	19,891	(404,677)	(111,250)
Derivative liabilities		(179,207)	(174,721)	(240,860)	(245,346)	(67,470)
Deposits		101,951	53,077	62,550	111,424	30,641
Accrued expenses		283,697	293,116	274,764	265,345	72,970
Defined benefit obligations		1,249,457	58,223	189,124	1,380,358	379,599
Plan assets		(1,267,932)	(58,223)	(220,512)	(1,430,221)	(393,310)
Other provisions		177,823	148,900	149,060	177,983	48,945
Allowance for guarantees and acceptance Allowance for advanced		105,542	141,434	126,975	91,083	25,048
depreciation Allowance for expensing		(177,137)	-	-	(177,137)	(48,713)
depreciation Net change in fair value of		(1,691)	(232)	-	(1,459)	(401)
securities at FVOCI		21,341	(245,501)	(130,519)	136,323	37,489
Donation payables		78,750	133,915	188,659	133,494	36,711
Allowance and bad debt Compensation expenses associated		162,884	126,646	65,321	101,559	34,158
with stock option		178	61	(8)	109	30
Fictitious dividends		4,060	-	366	4,426	1,217
Others	_	148,386	713,414	734,708	169,680	46,663
	_	(1,201,592)	(617,646)	(531,135)	(1,115,081)	(300,380)
Expired unused tax losses Appropriation by extinctive prescription of deposit		1,255,777	165,941	-	1,089,836	299,706
Temporary differences not qualified investments in associates and	for defe	rred tax assets or li	abilities:			
Subsidiaries (*2)	_	(685,456)		(91,679)	(777,135)	(213,709)
	₩_	739,641	(451,705)	(439,456)	751,890	213,035

^(*1) Deferred tax assets of overseas subsidiaries have increased by \(\psi\)1,530 million due to foreign currency exchange rate changes.

^(*2) The effect of income taxes by the valuation of equity method was reasonably estimated based on the both plausibility and the applicable amount of deferred income tax belonging to each associate investee.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

36. Income tax expense (continued)

(c) Changes in temporary differences and deferred tax assets (liabilities) for the years ended December 31, 2019 and 2018 were as follows: (continued)

	_			2018		
	_	Beginning Balance	Decreases	Increases	Ending balance	Deferred tax assets (liabilities) (*1)
Accrued income	₩	(479,275)	(479,275)	(644,318)	(644,318)	(177,187)
Accounts receivable		(60,062)	(60,062)	(88,065)	(88,065)	(24,218)
Securities at FVTPL		(49,926)	(106,847)	36,909	93,830	25,803
Securities at FVOCI Investments in associates and subsidiaries		829,525 (400,935)	401,295 (400,935)	(149,913) (612,345)	278,317 (612,345)	76,537 (168,395)
Deferred loan origination costs and fees Revaluation and depreciation		(427,937)	(427,937)	(497,515)	(497,515)	(136,817)
on property and equipment		(449,332)	(4,043)	5,691	(439,598)	(120,469)
Derivative liabilities		(132,214)	(148,734)	(195,727)	(179,207)	(49,282)
Deposits		101,468	15,498	15,981	101,951	28,036
Accrued expenses		426,001	426,001	283,697	283,697	78,017
Defined benefit obligations		1,142,677	105,667	212,447	1,249,457	343,601
Plan assets		(1,180,248)	(88,188)	(175,872)	(1,267,932)	(348,681)
Other provisions Allowance for guarantees		176,675	178,027	179,175	177,823	48,902
and acceptance Allowance for advanced depreciation		63,357 (179,393)	63,357 (2,256)	105,542	105,542 (177,137)	29,024 (48,713)
Allowance for expensing depreciation		(1,923)	(232)	-	(1,691)	(465)
Deemed dividends Net change in fair value of		19,171	19,171	-	-	-
securities at FVOCI		7,233	7,233	21,341	21,341	5,869
Donation payables		39,429	39,429	78,750	78,750	21,656
Allowance and bad debt Compensation expenses associated		463,135	463,135	162,884	162,884	45,903
with stock option		437	359	100	178	49
Fictitious dividends		4,060	-	-	4,060	1,116
Others	-	195,341	318,316	271,361	148,386	35,161
Expired unused tax losses Appropriation by extinctive prescription of deposit	<u>-</u>	1,281,039	318,979 25,262	(989,877)	1,255,777	(334,553)
Temporary differences not qualified	for defe	rred tax assets or l	iabilities:			
Investments in associates and Subsidiaries (*2)	_	(470,668)		(214,788)	(685,456)	(188,500)
	W	1, 858,971	344,241	(775,089)	739,641	199,286

^(*1) Deferred tax assets of overseas subsidiaries have decreased by \(\formalle{W}\)29 million due to foreign currency exchange rate changes.

^(*2) The effect of income taxes by the valuation of equity method was reasonably estimated based on the both plausibility and the applicable amount of deferred income tax belonging to each associate investee.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

36. <u>Income tax expense (continued)</u>

(d) Changes in tax effects that were directly charged or credited to equity for the years ended December 31, 2019 and 2018 were as follows:

		December 31, 2019		December		
		Amount before tax	Tax effects	Amount before tax	Tax effects	Changes in tax effects
Net change in fair value of securities at FVOCI	₩	136,322	(26,589)	(21,341)	223	(26,812)
Share of other comprehensive income (loss) of associates		8,281	(117)	4,923	(64)	(53)
Foreign currency translation differences for foreign operations		(206,083)	(9,697)	(296,622)	(16,381)	6,684
Remeasurements of defined benef plans	1t	(421,030)	115,882	(382,774)	105,339	10,543
Other (stock option)	_	1,088	(295)	6,690	(1,836)	1,541
	₩	(481,422)	79,184	(689,124)	87,281	(8,097)
		December	31, 2018	December	31, 2017	
	_	Amount	_	Amount	_	Changes in

2000111001 01, 2010		Determour :		
Amount before tax	Tax effects	Amount before tax	Tax effects	Changes in tax effects
(21,341)	223	(185,414)	60,874	(60,651)
				,
4,923	(64)	6,749	(163)	99
	, ,			
(296,622)	(16,381)	(311,258)	(25,905)	9,524
(382,774)	105,339	(285,698)	78,662	26,677
6,690	(1,836)	2,899	(3,757)	1,921
(689,124)	87,281	(772,722)	109,711	(22,430)
	(21,341) 4,923 (296,622) (382,774) 6,690	before tax Tax effects (21,341) 223 4,923 (64) (296,622) (16,381) (382,774) 105,339 6,690 (1,836)	before tax Tax effects before tax (21,341) 223 (185,414) 4,923 (64) 6,749 (296,622) (16,381) (311,258) (382,774) 105,339 (285,698) 6,690 (1,836) 2,899	before tax Tax effects before tax Tax effects (21,341) 223 (185,414) 60,874 4,923 (64) 6,749 (163) (296,622) (16,381) (311,258) (25,905) (382,774) 105,339 (285,698) 78,662 6,690 (1,836) 2,899 (3,757)

(e) The current tax assets and liabilities as of December 31, 2019 and 2018 were as follows:

	_1	December 31, 2019	December 31, 2018
Current tax assets: Prepaid income taxes	W	31,312	43,026
Current tax liabilities: Payable due to consolidated tax system	₩.	353,674	265,789
Income taxes payables		44,955	53,639
	<u>₩</u>	398,629	319,428

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won, except for earnings per share)

36. <u>Income tax expense (continued)</u>

(f) The deferred tax assets (liabilities) and current tax assets (liabilities) presented on a gross basis prior to any offsetting as of December 31, 2019 and 2018 were as follows:

	_	December 31, 2019	December 31, 2018
Deferred tax assets	W	1,904,536	1,713,266
Deferred tax liabilities		1,691,501	1,513,980
Current tax assets		400,753	236,015
Current tax liabilities		768,070	512,418

37. Earnings per share

(a) Earnings per share for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Profit for the year	₩	2,329,192	2,279,049
Less: dividends on hybrid bonds		(33,115)	(25,228)
Profit available for common stock	₩ <u></u>	2,296,077	2,253,821
Weighted average number of common shares			
outstanding		1,585,615,506 shares	1,585,615,506 shares
Basic and diluted earnings per share in won	₩	1,448	1,421

Considering that the Group had no dilutive potential common shares and that stock options were not included in the calculation of diluted earnings per share because they were anti-dilutive for the reporting periods presented, diluted earnings per share equal to basic earnings per share for the years ended December 31, 2019 and 2018.

(b) Weighted average number of common shares outstanding as of December 31, 2019 and 2018 were as follows:

	2019	2018
Number of common shares outstanding	1,585,615,506 shares	1,585,615,506 shares
Weight	365/365	365/365
Weighted average number of common shares		
outstanding	1,585,615,506 shares	1,585,615,506 shares

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

38. Commitments and contingencies

(a) Guarantees, acceptances and credit commitments as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Guarantees:			
Guarantee outstanding	W	9,298,134	9,415,888
Contingent guarantees		3,579,892	3,984,667
		12,878,026	13,400,555
Commitments to extend credit:			
Loan commitments in Korean won		72,114,261	69,126,234
Loan commitments in foreign currencies		22,470,583	19,967,126
ABS and ABCP purchase commitments		2,003,354	2,083,522
Others		2,574,184	1,907,432
		99,162,382	93,084,314
Endorsed bills:	_		
Secured endorsed bills		11,287	37,667
Unsecured endorsed bills		6,737,097	7,758,242
	_	6,748,384	7,795,909
Loans sold with repurchase agreement	_	2,099	2,099
	W _	118,790,891	114,282,877

(b) Provision for acceptances and guarantees

Allowance for acceptances and guarantees, as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Guarantees outstanding	W	9,298,134	9,415,888
Contingent guarantees		3,579,892	3,984,667
ABS and ABCP purchase commitments		2,003,354	2,083,522
Secured endorsed bills		11,287	37,667
	₩	14,892,667	15,521,744
Allowance for acceptances and guarantees	W	91,083	105,543
Ratio (%)		0.61	0.68

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

38. Commitments and contingencies (continued)

(c) Legal contingencies

Pending litigations in which the Group was involved as a defendant as of December 31, 2019 were as follows:

Cono	Number		Claim	Description	Status
Case Damage claim	of claim 1	W	6,893	Description The plaintiff filed a lawsuit against the Bank, which is a consignee according to the asset custody contract, for the damages caused by a fire in the property taken custody by the Bank.	Status In 2015 and 2017, the plaintiffs prevailed, but the first and second decisions were different and in progress of third order.
Deposit return	1		4,606	The plaintiff claimed that the Bank has cancelled the money deposited in his account without his consent, and requested the Bank to pay back the amount equivalent to the deposit.	Since 2017, the Bank won the first and second trial and the third trial was ongoing as of December 31, 2019.
Indemnification cost	1		4,112	The plaintiff, an insurance company, filed a lawsuit against the Bank, which is a consignee according to the asset custody contract, for the insurance money paid for the damages caused by a fire in the property taken custody by the Bank.	In 2017, the Bank has lost on the first order and in progress for second order.
Others	114		53,027	It includes various cases, such as compensat	ion for loss claim.
	117	W	68,638		

As of December 31, 2019, the Group recorded a provision of \(\pi\)5,895 million for litigation for certain of the above lawsuits. Additional losses may be incurred from these legal actions besides the current provision established by the Group, but the amount of loss is not expected to have a material adverse effect on the Group's consolidated financial statements.

(d) Others

On December 19, 2019, the Group received the Financial Dispute Resolution Committee's decision regarding certain currency option contracts, which will be processed in accordance with the Board of Director's resolution. The Group's management believes that the result of the resolution will not have a material impact on the Group's financial position. In addition, the Korean supervisory authorities is conducting inspections on certain private equity funds managed by Lime Asset Management and sold by the Group for alleged mis-selling activities. Depending on the results of the inspections, proceedings for dispute settlement and loss compensation on the miss-selling, if any, may take place. As of December 31, 2019, the amount of funds sold by the Group for which Lime Asset Management has delayed repurchase amounted to \w276.9 billion. The Group has not recognized any provision because whether a mis-selling has happened or the potential amount of compensation claimed against the Group cannot be estimated reliably.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

Changes in fair value of hedged items

Ending balance

39. Statements of cash flows

(a) Cash and cash equivalents reported in the accompanying consolidated statements of cash flows as of December 31, 2019 and 2018 were as follows:

		December 31, 2019	December 31, 2018
Cash	W	2,528,135	2,568,913
Reserve deposits		13,555,978	2,094,612
Other deposits		7,965,719	8,486,752
Cash and due from banks	_	24,049,832	13,150,277
Less: Restricted due from banks		(14,725,735)	(3,888,144)
Less: Due with original maturities of more than three			
months		(2,213,580)	(2,557,180)
	W	7,110,517	6,704,953

(b) Significant non-cash activities for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Dividend payable of hybrid bonds	W	-	2,597
Debt-equity swap		224,093	28,759
Accounts payable for purchase of property and equipment		-	897
Accounts payable for purchase of intangible assets		424,039	1,047
Recognition of right-of-use assets		712,228	-
Recognition of lease liabilities		665,146	-

(c) Changes in liabilities resulting from financing activities for the years ended December 31, 2019 and 2018 were as follows:

			December 31, 2019	
		Borrowings	Debt securities issued	Total
Beginning balance	W	16,154,821	31,899,266	48,054,087
Changes in cash flows		943,540	5,649,894	6,593,434
Amortization		848	(47,968)	(47,120)
Net foreign currencies transaction gain		226,675	215,766	442,441
Changes in fair value of hedged items		-	312,910	312,910
Ending balance	₩	17,325,884	38,029,868	55,355,752
			December 31, 2018	
		Borrowings	Debt securities issued	Total
Beginning balance	W	14,617,562	25,460,427	40,077,989
Changes in cash flows		1,094,960	6,447,699	7,542,659
Amortization		(1,722)	(76,675)	(78,397)
Net foreign currencies transaction gain		444,021	30,211	474,232

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

40. Related party transactions

(a) Significant balances with the related parties as of December 31, 2019 and 2018 were as follows:

Related party	Account		December 31, 2019	December 31, 2018
The parent company				
Shinhan Financial Group	Other assets	₩	59	-
1	Deposits		167	24
	Other liabilities		406,269	309,355
Entities under common control			•	
Shinhan Card Co., Ltd.	Derivative assets		12,066	5,100
	Loans		103,018	33,732
	Allowance for loan loss		(629)	(202)
	Other assets (*1)		13,575	1,338
	Deposits		35,260	23,522
	Derivative liabilities		516	269
	Provisions		63	180
	Other liabilities		31,891	22,702
Shinhan Investment Corp.	Cash and due from banks		6,202	6,281
	Derivative assets		11,814	13,095
	Loans		5	22,917
	Allowance for loan loss		(5)	(151)
	Other assets (*1)		19,473	19,972
	Deposits		565,972	202,561
	Borrowings		11,100	11,100
	Derivative liabilities		6,749	1,981
	Provisions		532	67
	Other liabilities		42,312	40,338
Shinhan Life Insurance	Derivative assets		20,542	17,302
	Other assets		9	3
	Deposits		14,724	14,335
	Derivative liabilities		12,771	7,771
	Provisions		5	16
	Other liabilities		11,940	14,674
Shinhan Capital Co., Ltd.	Deposits		904	1,504
	Borrowings		1,000	12,000
	Provisions		26	14
	Other liabilities		13,575	13,611
Jeju Bank	Loans		4,573	1,621
	Allowance for loan loss		(3)	(2)
	Other assets		2	1
	Deposits		1,881	11,045
	Other liabilities		2,139	2,446
Shinhan Credit Information	Deposits		4,842	3,793
Co., Ltd.	Other liabilities		2,195	1,599
Shinhan Alternative Investment	Deposits		8,288	5,405
Management, Inc.	Other liabilities		9	23

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

40. Related party transactions (continued)

(a) Significant balances with the related parties as of December 31, 2019 and 2018 were as follows: (continued)

Related party	Account		December 31, 2019	December 31, 2018
Entities under common control (co	ntinued)			
Shinhan BNP Paribas AMC	Deposits	W	57,986	121,976
	Other liabilities		642	1,673
Shinhan DS	Loans		8	2
	Other assets		1,443	-
	Deposits		4,961	815
	Other liabilities		9,069	6,567
Shinhan Savings Bank	Other liabilities		8,987	8,987
Shinhan Aitas	Deposits		24,079	14,604
	Other liabilities		20	60
Shinhan AI Co., Ltd.	Deposits		1	-
	Other liabilities		1,929	-
Shinhan REITs Management	Deposits		-	79
Orange Life Insurance Co., Ltd.	Deposits		2,402	-
•	Derivative liabilities		446	-
Investments in associates and entiti	ies under common control			
BNP Paribas Cardif				
Life Insurance Co., Ltd.	Deposits		402	444
BNP Paribas Cardif General				
Insurance	Deposits		17	157
Dream High Fund III	Deposits		5	4
Midas Dong-A Snowball				
Venture Fund	Deposits		-	159
Partners 4th Growth Investment				
Fund	Deposits		1,443	1,855
Credian Health Care Private				
Equity Fund II	Deposits		4	45
Snowball Venture Fund II	Deposits		233	354
IBKS-Shinhan Creative Economy				
New Technology Fund II	Deposits		-	672
YIUM The 3rd Private Investment				
Joint Stock Company	Deposits		353	49
Taihan Industrial System Co.,				
Ltd. (*2)	Provisions		-	85
ICSF (The Korea's Information				
Center for Savings & Finance)	Deposits		6	4

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

40. Related party transactions (continued)

(a) Significant balances with the related parties as of December 31, 2019 and 2018 were as follows: (continued)

D. L. J.		December 31,	December 31,
Related party	Account	2019	2018
Investments in associates and entities u	nder common control (continued)		
Multimedia Tech Co., Ltd.	Deposits	3	=
KOREA FINANCE SECURITY	Deposits	362	-
Hermes Private Investment Equity Fund	Deposits	275	=
Korea Credit Bureau	Deposits	80	-
Goduck Gangill PFV Co., Ltd.	Loans	24,000	-
	Allowance for loan loss	(78)	-
SBC PFV Co., Ltd.	Deposits	5,142	-
GMG Development Co., Ltd.	Deposits	300	-
Sprott Global Renewable Private Equity			
Fund I	Deposits	342	-
IMM Global Private Equity Fund	Loans	800	-
IMM Global Private Equity Fund	Allowance for loan loss	(3)	-
	Deposits	7,598	-
Key management personnel			
	Loans	4,426	2,783
	Allowance for loan loss	(3)	(1)
	Provisions	1	1

^(*1) Included right-of-use assets of leases.

(b) Significant transactions with the related parties for the years ended December 31, 2019 and 2018 were as follows:

Related party	Account	_	2019	2018
The parent company				
Shinhan Financial Group	Other income	W	1,259	1,392
	Interest expense		(258)	(268)
	Fees and commission expense		(32,300)	(31,608)
Entities under common control	_			
Shinhan Card Co., Ltd.	Interest income		4,621	3,302
	Fees and commission income		182,787	198,589
	Gain related to derivatives		15,598	8,975
	Other income		1,841	1,815
	Interest expense		(701)	(256)
	Fees and commission expense		(441)	(180)
	Loss related to derivatives		(4,066)	(371)
	Reversal of (provision for) allowance		(427)	164
	Other expense		(2,584)	(3,561)

^(*2) This investee was excluded from associates during the year ended December, 2019, since the Group had no significant influence over it.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

40. Related party transactions (continued)

(b) Significant transactions with the related parties for the years ended December 31, 2019 and 2018 were as follows: (continued)

Related party	Account	2019	2018
Entities under common control (continued)		
Shinhan Investment Corp.	Interest income	1,612	950
	Fees and commission income	5,984	7,362
	Gain related to derivatives	38,807	45,592
	Other income	2,621	4,484
	Interest expense	(2,234)	(2,247)
	Loss related to derivatives	(34,770)	(14,150)
	Reversal of (provision for)		
	allowance	146	(149)
	Other expense	(157)	(286)
Shinhan Life Insurance	Interest income	49	49
	Fees and commission income	10,295	11,286
	Gain related to derivatives	62,337	51,311
	Other income	650	695
	Interest expense	(244)	(278)
	Fees and commission expense	(269)	-
	Loss related to derivatives	(11,301)	(8,272)
	Other expense	(399)	(641)
Shinhan Capital Co., Ltd.	Interest income	ĺ	-
1	Other income	320	972
	Interest expense	(765)	(852)
	Other expense	(12)	-
Jeju Bank	Interest income	6	25
3	Other income	227	52
	Interest expense	(41)	(79)
	provision for allowance	(3)	(1)
Shinhan Credit Information	Fees and commission income	4	3
Co., Ltd.	Other income	53	83
•	Interest expense	(77)	(84)
	Fees and commission expense	(6,332)	(5,095)
Shinhan Alternative Investment	1	() /	() ,
Management, Inc.	Interest expense	(74)	(37)
Shinhan BNP Paribas AMC	Fees and commission income	38	44
	Other income	68	9
	Interest expense	(1,220)	(2,157)
	Fees and commission expense	(2,099)	(2,158)
Shinhan DS	Other income	201	175
	Interest expense	(199)	(146)
	Other expense	(44,548)	(41,096)
Shinhan Savings Bank	Fees and commission income	966	869
C	Other income	215	205
	Interest expense	(163)	(152)
	1	(/	()

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

40. Related party transactions (continued)

(b) Significant transactions with the related parties for the years ended December 31, 2019 and 2018 were as follows: (continued)

Related party	Account	2019	2018
Entities under common control (c	continued)		
Shinhan Aitas	Fees and commission income	45	40
	Other income	56	6
	Interest expense	(36)	(70)
	Fees and commission expense	(29)	-
Shinhan REITs Management	Interest expense	- -	(132)
Shinhan AI Co., Ltd.	Other income	5,953	-
	Fees and commission expense	(1,929)	_
Orange Life Insurance Co., Ltd.	Fees and commission income	1,576	_
	Gain related to derivatives	604	_
	Interest expense	(37)	_
	Loss related to derivatives	(446)	_
Asia Trust Co., Ltd.	Other income	14	_
Investments in associates and ent	ities under common control		
BNP Paribas Cardif Life	Fees and commission income	3,028	2,496
Insurance Co., Ltd.	Other expense	(1)	-
BNP Paribas Cardif General	1		
Insurance	Fees and commission income	9	5
Midas Dong-A Snowball			
Venture Fund	Interest expense	(1)	(2)
Partners 4th Growth	1		()
Investment Fund	Interest expense	(7)	(19)
JAEYOUNG SOLUTECH	1	()	()
Co., Ltd. (*1)	Interest income	_	347
, , ,	Fees and commission income	_	1
	Other income	_	3
	provision for allowance	_	(2)
	Interest expense	_	(1)
Snowball Venture Fund II	Interest expense	_	(2)
Taihan Industrial System(*2)	Fees and commission income	<u>-</u>	1
Hyungje Art Printing	Interest income	<u>-</u>	13
ii) ungje i iie i iiiung	Fees and commission income	<u>-</u>	1
KOREA FINANCE SECURITY	Fees and commission income	10	-
WON JIN HOME PLAN Co.,	1 000 and commission meens	10	
Ltd.	Interest income	186	_
Korea Credit Bureau	Fees and commission income	13	_
Rossa Crount Bureau	Interest expense	(5)	_
	interest expense	(3)	_

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

40. Related party transactions (continued)

(b) Significant transactions with the related parties for the years ended December 31, 2019 and 2018 were as follows: (continued)

Related party	Account	2019	2018
Investments in associates and en	tities under common control		
Goduck Gangill PFV Co., Ltd.	Interest income	328	-
	Fees and commission income	1,120	-
	provision for allowance	(78)	-
SBC PFV Co., Ltd.	Interest expense	(3)	-
IMM Global Private Equity Fund	Interest income	28	-
	Interest expense	(25)	-
	provision for allowance	(3)	-
Key management personnel			
	Interest income	161	94
(*1) These investor was sold and an	aludad fuam assasiatas dunina tha room anda	d Dagambar 21, 2010	

- (*1) These investee was sold and excluded from associates during the year ended December 31, 2019.
- (*2) This investee was excluded from associates during the year ended December, 2019, since the Group had no significant influence over it.
- (c) Details of transactions with key management for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Short and long term employee benefits	₩	10,506	14,175
Post-employment benefits		355	305
Share-based payment transactions		5,167	2,393
	w	16,028	16,873

(d) The guarantees provided between the related parties as of December 31, 2019 and 2018 were as follows:

	Amount of gu	ıarantees	
	December 31,	December 31,	
	2019	2018	Account
W	258,901	226,143	Unused credit
	575,912	504,832	Unused credit
	14,473	-	Financial guarantees
	50,000	50,000	Unused credit
	70,000	70,000	Unused credit
	10,000	10,000	Unused credit
	37,925	3,600	Security underwriting commitment
	7	13	Unused credit
W	1,017,218	864,588	
		December 31, 2019 W 258,901 575,912 14,473 50,000 70,000 10,000 37,925 7	2019 2018 W 258,901 226,143 575,912 504,832 14,473 - 50,000 50,000 70,000 70,000 10,000 10,000 37,925 3,600 7 13

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

40. Related party transactions (continued)

- (e) Collaterals provided by related parties
 - i) Details of collaterals provided to the related parties as of December 31, 2019 and 2018 were as follows:

				December 31, 2019		December	31, 2018
		Pledged	-	Carrying	Amounts	Carrying	Amounts
	Related party	assets		amounts	collateralized	amounts	collateralized
Entities under	Shinhan Life	Securities		10,189	10,189	10,230	10,230
common	Insurance						
control	Orange Life	Securities		10,243	516	-	-
	Insurance		_				
			₩	20,432	10,705	10,230	10,230

ii) Details of collaterals provided by the related parties as of December 31, 2019 and 2018 were as follows:

	Related party	Pledged assets		December 31, 2019	December 31, 2018
Entities under	Shinhan Investment Corp.	Deposits	W	135,700	135,700
common control	•	Real estate		91,974	91,974
	Jeju Bank	Government bonds		20,000	20,000
	Shinhan Life Insurance	Government bonds		6,000	6,000
	Shinhan Credit Information Co., Ltd.	Deposits		180	180
Investments in associates	BNP Paribas Cardif Life Insurance Co., Ltd.	Government bonds		12,000	12,000
	Hyungje art printing	Machine equipment		120	-
	Goduck Gangill PFV Co., Ltd.	Trust		28,800	-
			₩	294,774	265,854

(f) Transaction with related parties

i) Details of significant lease and collection of related parties as of December 31, 2019 and 2018 were as follows

		2019						
		-	Beginning			Ending		
	Related party		balance (*1)	Rental	Recovery	balance (*1)		
	Shinhan Financial		-		_			
Entities under	Investment	₩	22,917	26,311	(49,223)	5		
common control	Shinhan Card Co., Ltd.		33,732	86,410	(17,124)	103,018		
	Jeju Bank		1,621	9,189	(6,237)	4,573		
	Shinhan DS		2	9	(3)	8		
Investments	in Goduck Gangill PFV Co., Ltd.		-	24,000	-	24,000		
associates and entities under	IMM Global Private Equity							
common control	Fund	_	_	800		800		
		_	58,272	146,719	(72,587)	132,404		

^(*1) The amount is before deducting allowance for bad debts.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

40. Related party transactions (continued)

- (f) Transaction with related parties (continued)
 - i) Details of significant lease and collection of related parties as of December 31, 2019 and 2018 were as follows: (continued)

			2018		
		Beginning			Ending balance
	Related party	balance (*1)	Rental	Recovery	(*1)
	Shinhan Investment Corp.	14,987	39,315	(31,385)	22,917
Entities under	Shinhan Card Co., Ltd.	39,529	16,932	(22,729)	33,732
common control	Jeju Bank	2,658	14,494	(15,531)	1,621
	Shinhan DS	<u> </u>	2	_	2
		57,174	70,743	(69,645)	58,272

(*1) The amount is before deducting allowance for bad debts.

ii) Details of significant redemption of borrowings of related parties as of December 31, 2019 and 2018 were as follows:

				2019				
	Related party	Account		Beginning balance	Borrowing	Redemption	Ending balance	
Entities under	Shinhan Investment Corp.	Borrowing	₩	11,100	-	-	11,100	
common control	Shinhan Capital Co., Ltd.	Borrowing		12,000	-	(11,000)	1,000	
	Shinhan Investment Corp. Shinhan Credit Information	Deposit (*1)		42,000	-	-	42,000	
	Co., Ltd.	Deposit (*1)		2,390	-	-	2,390	
	Shinhan Card Co., Ltd. Shinhan Alternative Invest-	Deposit (*1)		50	-	(45)	5	
	ment Management Inc.	Deposit (*1)		4,600	1,000	(3,800)	1,800	
	Shinhan BNP Paribas AMC	Deposit (*1)		104,500	15,100	(76,500)	43,100	
	Shinhan Aitas	Deposit (*1)		4,000	10,000	(4,000)	10,000	
	Shinhan DS	Deposit (*1)		513	-	(513)	-	
Investments in associates and entities under common control	Midas Dong-A Snowball Venture Fund	Deposit (*1)		158	-	(158)	_	
		• ` ` `	W	181,311	26,100	(96,016)	111,395	
			-	,				

(*1) Details of settlements among related parties, such as depository liabilities that can be deposited and withdrawn on demand, were excluded.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

40. Related party transactions (continued)

- (f) Transaction with related parties (continued)
 - ii) Details of significant redemption of borrowings of related parties as of December 31, 2019 and 2018 were as follows: (continued)

				2018				
	Related party	Account		Beginning balance	Borrowing	Redemption	Ending balance	
Entities under	Shinhan Investment Corp.	Borrowing	₩	15,000	-	(3,900)	11,100	
common control	Shinhan Capital Co., Ltd.	Borrowing		13,000	-	(1,000)	12,000	
	Shinhan Investment Corp. Shinhan Credit Information	Deposit (*1)		42,000	-	-	42,000	
	Co., Ltd.	Deposit (*1)		4,390	-	(2,000)	2,390	
	Shinhan Card Co., Ltd. Shinhan Alternative Invest-	Deposit (*1)		50	-	-	50	
	ment Management Inc.	Deposit (*1)		-	4,600	-	4,600	
	Shinhan BNP Paribas AMC	Deposit (*1)		101,600	16,500	(13,600)	104,500	
	Shinhan Aitas	Deposit (*1)		3,000	1,000	-	4,000	
	Shinhan DS	Deposit (*1)		4,478	-	(3,965)	513	
	Shinhan REITs Management	Deposit (*1)		-	19,000	(19,000)	-	
Investments in associates and entities under common control	Midas Dong-A Snowball Venture Fund	Deposit (*1)		220	15	(77)	158	
			W	183,738	41,115	(43,542)	181,311	

^(*1) Details of settlements among related parties, such as depository liabilities that can be deposited and withdrawn on demand, were excluded.

(g) Transaction of business transfer under common control

As of November 27, 2018, Shinhan Asia Limited transferred assets of \(\pi\)727,206 million and liabilities of \(\pi\)727,194 million to Shinhan Bank, Hong Kong branch. This is a transaction of business transfer under common control, and the Bank accounted for the transfer as book value.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

41. Summary of subsidiaries' financial statements

(a) Condensed statements of financial positions for the Bank and its subsidiaries as of December 31, 2019 and 2018 were as follows:

			2019		2018			
	_	Total assets	Total liabilities	Total equity	Total assets	Total liabilities	Total equity	
Shinhan Bank	₩	364,744,341	339,669,735	25,074,606	323,875,533	300,304,150	23,571,383	
Shinhan America		1,896,516	1,659,844	236,672	1,584,978	1,358,153	226,825	
Shinhan Canada		730,808	655,879	74,929	607,970	541,887	66,083	
Shinhan Europe		637,943	555,205	82,738	604,022	522,862	81,160	
Shinhan China		5,451,603	4,987,520	464,083	5,448,655	5,031,704	416,951	
Shinhan Asia (*1)		118,907	-	118,907	115,360	-	115,360	
Shinhan Kazakhstan		162,564	119,381	43,183	122,927	83,431	39,496	
Shinhan Cambodia		520,994	393,170	127,824	282,807	167,372	115,435	
Shinhan Japan		9,430,155	8,747,927	682,228	7,704,586	7,126,117	578,469	
Shinhan Vietnam (*2)		5,257,696	4,411,350	846,346	4,101,845	3,489,835	612,010	
Shinhan Mexico		198,402	106,747	91,655	118,821	35,253	83,568	
Shinhan Indonesia (*2)		1,339,525	965,242	374,283	971,954	613,185	358,769	
Structured entities		8,764,132	8,771,900	(7,768)	8,111,107	8,108,193	2,914	

^(*1) The liquidation process was in progress as of December 31, 2019.

^(*2) Fair value adjustment at the time of business combination was applied.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

41. Summary of subsidiaries' financial statements (continued)

(b) Condensed statements of comprehensive income for the Bank and its subsidiaries for the years ended December 31, 2019 and 2018 were as follows:

	_		2019		2018			
			Profit	Total		Profit	Total	
		Operating	(loss) for	comprehensive	Operating	(loss) for	comprehensive	
	_	income	the year	income (loss)	income	the year	income (loss)	
Shinhan Bank	W	21,909,875	2,071,235	2,130,313	18,611,228	2,116,606	2,179,652	
Shinhan America		82,560	1,020	9,848	69,149	(2,547)	4,046	
Shinhan Canada		29,502	3,480	8,846	23,027	2,760	174	
Shinhan Europe		17,123	421	1,578	14,243	14	8	
Shinhan China		226,877	35,250	47,132	284,885	31,764	47,129	
Shinhan Asia (*1)		-	(548)	3,548	39,666	20,319	30,886	
Shinhan Kazakhstan		11,093	2,073	3,688	10,815	1,929	(2,356)	
Shinhan Cambodia		27,466	8,345	12,389	17,492	8,102	12,777	
Shinhan Japan		221,414	75,392	103,759	187,806	64,929	95,418	
Shinhan Vietnam (*2)		380,267	124,336	175,380	292,539	94,987	79,317	
Shinhan Mexico		11,121	1,815	8,088	6,736	(116)	3,627	
Shinhan Indonesia (*2)		84,319	(13,685)	15,512	64,006	10,640	(120)	
Structured entities		260,398	(4,787)	(5,674)	241,466	(12,499)	(22,325)	

^(*1) The liquidation process was in progress as of December 31, 2019.

^(*2) Fair value adjustment at the time of business combination was applied.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018

42. <u>Interests in unconsolidated structured entities</u>

(a) The nature and extent of interests in unconsolidated structured entities

The Group involved in assets-backed securitization, structured financing, beneficiary certificates and other structured entities and characteristics of these structured entities are as follows:

	Description
Assets-backed	Securitization vehicles are established to buy assets from originators and issue
securitization	asset-backed securities in order to facilitate the originators' funding activities and
	enhance their financial soundness. The Group is involved in the securitization
	vehicles by purchasing (or committing to purchase) the asset-backed securities
	issued and/or providing other forms of credit enhancement.
	The Group does not consolidate a securitization vehicle if (i) the Group is unable to make or approve decisions as to the modification of the terms and conditions of the securities issued by such vehicle or disposal of such vehicles' assets, (ii) (even if the Group is able to do so) if the Group does not have the exclusive or primary power to do so, or (iii) if the Group does not have exposure, or right, to a significant amount of variable returns from such entity due to the purchase (or commitment to purchase) of asset-backed securities issued or subordinated obligations or by providing other forms of credit support.
Structured financing	Structured entities for project financing are established to raise funds and invest in a specific project such as M&A (Mergers and Acquisitions), BTL (Build-Transfer-Lease), shipping finance, etc. The Group is involved in the structured entities by originating loans, investing in equity, or providing credit enhancement
Investment fund	Investment fund is a type of financial instrument where investment funds raise funds from the general public to invest in a group of assets such as stocks or bonds and distribute their income and capital gains to their investors. The Group is involved in investment fund by investing in various investment funds.

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

42. <u>Interests in unconsolidated structured entities (continued)</u>

- (a) The nature and extent of interests in unconsolidated structured entities (continued)
 - i) The size of unconsolidated structured entities as of December 31, 2019 and 2018 were as follows:

	_	Assets-backed securitization	Structured financing	Investment fund	Total
Total assets	₩	81,014,871	110,511,866	86,166,205	277,692,942
			December 3	1, 2018	
	_	Assets-backed	Structured	Investment	
	_	securitization	financing	fund	Total
Total assets	W	87,030,471	71,518,755	32,031,029	190,580,255

ii) The carrying amounts of the assets and liabilities recognized relating to its interests in unconsolidated structured entities as of December 31, 2019 and 2018 were as follows:

	_	December 31, 2019					
	_	Assets-backed securitization	Structured financing	Investment fund	Total		
Assets:							
Loans at amortized cost	W	196,522	5,695,134	79,287	5,970,943		
Securities at FVPL		3,400,040	17,016	3,095,708	6,512,764		
Derivative assets		21,494	1,028	-	22,522		
Securities at FVOCI		1,711,025	186,562	-	1,897,587		
Securities at amortized							
cost		3,106,869	-	-	3,106,869		
Others		-	10,050	57,935	67,985		
	W	8,435,950	5,909,790	3,232,930	17,578,670		

		December 31, 2018					
	_	Assets-backed	Structured	Investment			
		securitization	financing	fund	Total		
Assets:	_			_			
Loans at amortized cost	W	191,160	3,655,478	25,151	3,871,789		
Securities at FVPL		3,720,323	178	2,601,732	6,322,233		
Derivative assets		16,445	673	-	17,118		
Securities at FVOCI		1,740,939	90,866	-	1,831,805		
Securities at amortized							
cost		2,945,914	-	-	2,945,914		
Others		-	-	56,001	56,001		
	W	8,614,781	3,747,195	2,682,884	15,044,860		
Liabilities:	_			_			
Derivative liabilities	W	306	-	-	306		

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

42. <u>Interests in unconsolidated structured entities (continued)</u>

- (b) Nature of risk associated with interests in unconsolidated structured entities (continued)
 - ii) Exposure to risk relating to interests in unconsolidated structured entities as of December 31, 2019 and 2018 were as follows:

		December 31, 2019				
	-	Assets-backed	Structured	Investment		
		securitization	financing	fund	Total	
Assets owned	W	8,435,950	5,909,790	3,232,930	17,578,670	
Purchase commitments		1,095,707	-	-	1,095,707	
Providing unused credit		829,192	123,835	20,100	973,127	
	W	10,360,849	6,033,625	3,253,030	19,647,504	
		December 31, 2018				
	_					
		Assets-backed	Structured	Investment		
		Assets-backed securitization	Structured financing	Investment fund	Total	
Assets owned	W				Total 15,044,858	
Assets owned Purchase commitments	₩	securitization	financing	fund		
	₩	securitization 8,614,780	financing	fund	15,044,858	
Purchase commitments	₩	8,614,780 1,282,874	financing 3,747,194	fund 2,682,884	15,044,858 1,282,874	

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

43. <u>Information of trust business</u>

(a) Total assets with trust business as of December 31, 2019 and 2018 and operating revenue for the years ended December 31, 2019 and 2018 were as follows:

		Total assets		Operating revenue	
		December 31,	December 31,		_
	_	2019	2018	2019	2018
Consolidated	W	4,602,965	4,521,280	150,825	128,577
Unconsolidated		88,524,148	71,639,988	1,584,508	996,465
	W	93,127,113	76,161,268	1,735,333	1,125,042

(b) Significant balances with trust business as of December 31, 2019 and 2018 were as follows:

	December 31, 2019		December 31, 2018	
Borrowings from trust accounts	W	5,343,259	2,994,798	
Deposits				
Accrued revenues from asset management fee		46,331	271,745	
from trust accounts		34,796	34,286	
Accrued interest expenses		1,342	1,325	

(c) Significant transactions with trust business for the years ended December 31, 2019 and 2018 were as follows:

		2019	2018
Asset management fee from trust			
accounts	₩	238,246	192,422
Termination fee		7,824	6,840
Interest on deposits		6,275	9,672
Interest on borrowings from trust accounts		60,834	45,154

Notes to the Consolidated Financial Statements

For the years ended December 31, 2019 and 2018 (In millions of won)

44. Transition effects arising from changes in accounting policies

Upon adoption of K-IFRS No.1116, the Group recognized lease liabilities in relation to leases that had previously been classified as operating lease in accordance with K-IFRS No.1017. The lease liabilities are measured at the present value of the remaining lease payments discounted at the lessee's incremental borrowing rate of interest as of January 1, 2019. The weighted average lessee's borrowing rate of interest applied to the lease liability is 2.28%, as of January 1, 2019.

The difference between the amounts of operating lease contracts disclosed at December 31, 2018 discounted at the Group's incremental borrowing rate of interest and the lease liabilities recognized at the date of initial application is as follows:

		Amounts
Operating lease commitment disclosed as of December 31, 2018	W	518,516
Amount discounted using the Group's incremental borrowing rate of interest		504,660
Less: value-added tax		(43,318)
Lease liabilities recognized at the beginning of 2019	W	461,342

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Lease right-of-use assets were estimated by adjusting the amount of prepaid or unpaid lease payments in relation to leases, recognized in the consolidated statement of financial position at December 31, 2018, to the same amount of lease liability. As a result, the amount of right-of-use assets of \$\fomathbf{\psi}502,364\$ million was recognized as of January 1, 2019, and prepaid expense decreased by \$\fomathbf{\psi}34,213\$ million as of the same date. There is no net effect on retained earnings at the beginning of 2019.