

SK Holdings Co., Ltd.

Separate financial statements for the years ended December 31, 2018 and 2017 with the independent auditor's report

Table of contents

Independent auditor's report

	Page
Separate financial statements	i ugo
Separate statements of financial position	1
Separate statements of comprehensive income	2
Separate statements of changes in shareholders' equity	3
Separate statements of cash flows	5
Notes to the separate financial statements	6
Independent auditors' review report on internal control over financial reporting	76



Ernst & Young Han Young Taeyoung Building, 111, Yeouigongwon-ro, Yeongdeungpo-gu, Seoul 07241 Korea

Tel: +82 2 3787 6600 Fax: +82 2 783 5890 ey.com/kr

Independent auditor's report

The Shareholders and Board of Directors SK Holdings Co., Ltd.

Opinion

We have audited the accompanying separate financial statements of SK Holdings Co., Ltd. (the "Company"), which comprise the separate statement of financial position as at December 31, 2018 and 2017, respectively, the separate statements of comprehensive income, separate statements of changes in shareholders' equity and separate statements of cash flows, for the years then ended, and the notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the separate financial statements present fairly, in all material respects, the separate financial position of the Company as at December 31, 2018 and 2017, and its separate financial performance and its separate cash flows for the years then ended in accordance with Korean International Financial Reporting Standards (KIFRS).

Basis for opinion

We conducted our audits in accordance with the Korean Auditing Standards (KGAAS). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the separate financial statements section of our report. We are independent of the Company in accordance with the ethical requirements, including those related to independence, that are relevant to our audit of the separate financial statements in the Republic of Korea as required by prevailing audit regulations. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the separate financial statements of the current period. These matters were addressed in the context of our audit of the separate financial statements as a whole, and in forming our audit opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the Auditor's responsibilities for the audit of the separate financial statements section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the separate financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying separate financial statements.

Revenue recognition by input method

As discussed in Note 2 of the financial statements, if the Company can reasonably measure the progress of the performance obligation for construction contracts and system construction services, the contract revenue related to the performance obligation is recognized as revenue based on the progress of the contract activity as at the end of the reporting period. The Company measures the progress of contracts at the rate of cumulative contract costs incurred for the performance obligation divided by the estimated total contract costs, and these methods of measurement have uncertainties in accounting estimates because the measurement results are significantly affected by management's judgment.



We have selected revenue recognition as a key audit matter considering the likelihood of errors in estimating the progress rate or the likelihood of errors in profit or loss due to a intentional misstatement.

The major audit procedures we have conducted in this regard are:

- Understanding of revenue recognition accounting policy and review of changes
- Review the appropriateness of whether conditions that progress can reasonably measure are met
- Recalculation of progress estimates and review of contracts whose progress has significantly changed
- Reviewing and inspecting documents regarding the appropriateness of accounting for the estimated total contract cost and changes in the performance obligation
- Reviewing and inspecting documents regarding the cause of significant change in total contract revenue or estimated total contract cost

Responsibilities of management and those charged with governance for the financial statements

Management is responsible for the preparation of the accompanying separate financial statements in accordance with KIFRS, and for such internal control as management determine is necessary to enable the preparation of separate financial statements that are free from material misstatement, whether due to fraud or error.

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

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

Auditor's responsibilities for the audit of the separate financial statements

Our objectives are to obtain reasonable assurance about whether the separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with KGAAS 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 separate financial statements.

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

- Identify and assess the risks of material misstatement of the separate financial statements, 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 Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the separate financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.



• Evaluate the overall presentation, structure and content of the separate financial statements, including the disclosures, and whether the separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

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

We also provide the those charged with governance with a statement that we have complied with relevant ethical requirements, including those related to independence, and to communicate with them all matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the separate financial statements of the current period and are therefore the key audit matters or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The partner in charge of the audit resulting in this independent auditor's report is Bok-Han Lee

Einst Joung Han Joung

March 12, 2019

This audit report is effective as at March 12, 2019, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditor's report to the time this report is used. Such events and circumstances could significantly affect the accompanying separate financial statements and may result in modifications to this report.

SK Holdings Co., Ltd.

Separate financial statements for the years ended December 31, 2018 and 2017

"The accompanying separate financial statements, including all footnotes and disclosures, have been prepared by, and are the responsibility of the Company."

Tae-Won Chey and Dong-Hyun Jang Chief Executive Officers SK Holdings Co., Ltd.

SK Holdings Co., Ltd. Separate statements of financial position as at December 31, 2018 and 2017 (Korean won in millions and U.S. dollar in thousands)

			Korea	an wor	1		Translation i (No	nto U. te 2)	S. dollar
	Notes		2018	-	2017		2018		2017
Assets									
Current assets:									
Cash and cash equivalents	4,31	₩	123,858	₩	84,482	\$	110,775	\$	75,557
Short-term financial instruments	4,29,30		128,491		43,516		114,919		38,920
Trade accounts receivable	4,5,26,30		492,226		463,079		440,234		414,166
Other accounts receivable	4,26,30,31		1,858		1,767		1,662		1,580
Inventories	6		172		785		154		702
Other current assets	4,16,17,26,30		20,612		13,603		18,435		12,166
Assets held-for-sale	7		-		224,942		-		201,182
Total current assets			767,217		832,174		686,179		744,273
Non-current assets:									
Long-term investment securities	4,7,29,30,31		395,085		-		353,354		-
Available-for-sale financial assets	4,7,29,30		· -		78,984		, -		70,641
Investments in subsidiaries	8,31		16,605,095		15,583,417		14,851,172		13,937,409
Investments in associates and	,				, ,				, ,
joint ventures	9		802,807		647,970		718,010		579,528
Property, plant and equipment	10		494,803		671,658		442,539		600,714
Investment property	11		8,353		40,174		7,471		35,931
Goodwill and intangible assets	12		2,105,698		2,090,299		1,883,282		1,869,510
Other non-current assets	4,16,17,26,29,30		197,610		14,385		176,737		12,865
Total non-current assets	.,,,,,,		20,609,451		19,126,887	·	18,432,565		17,106,598
Total assets		₩	21,376,668	₩	19,959,061	\$	19,118,744	\$	17,850,871
Liabilities and equity Current liabilities: Short-term borrowings Trade accounts payable Other accounts payable Accrued expenses	4,13,28,29,30 4,26,30 4,26,28,30 4,30 14	₩	910,000 116,507 98,969 67,400	₩	780,000 125,590 98,155 58,695	\$	813,881 104,201 88,515 60,281	\$	697,612 112,324 87,787 52,495
Provisions			3,204		7,949		2,866		7,109
Current portion of long-term debt Other current liabilities	4,13,28,30		1,083,112 225,141		1,052,733 135,282		968,708		941,537 120,993
Liabilities held-for-sale	4,16,17,26,30		225,141		16,582		201,360		14,831
Total current liabilities			2,504,333		2,274,986		2,239,812		2,034,688
Total current liabilities			2,304,333	·	2,274,900	·	2,239,012		2,034,088
Non-current liabilities: Bonds payable	4,13,28,30		5,134,589		5,034,055		4,592,245		4,502,330
Retirement benefit obligation	4,13,28,30		44,403		38,799		4,592,245		4,502,550
Deferred income tax liabilities	24		268,728		257,340		240,343		230,158
Other non-current liabilities	4,16,17,26,30		256,479		237,340		229,388		18,943
Total non-current liabilities	4,10,17,20,30		5,704,199		5,351,374		5,101,689		4,786,132
Total liabilities			8,208,532	·	7,626,360		7,341,501		6,820,820
Equity:									
Issued capital	1,18		15,385		15,385		13,760		13,760
Other paid-in capital	18,31		4,411,253		4,720,271		3,945,312		4,221,689
Retained earnings	18		8,743,527		7,585,590		7,819,987		6,784,357
Other capital components	18		(2,029)		11,455		(1,816)		10,245
Total equity	10		13,168,136	·	12,332,701	·	11,777,243		11,030,051
Total liabilities and equity		₩	21,376,668	₩	19,959,061	\$	19,118,744	\$	17,850,871
i otal naonnieo anu equity		<u></u>	21,0/0,000		13,333,001	<u>_</u>	10,110,744	<u>Ψ</u>	17,000,071

The accompanying notes are an integral part of the separate financial statements.

SK Holdings Co., Ltd. Separate statements of comprehensive income for the years ended December 31, 2018 and 2017 (Korean won in millions and U.S. dollar in thousands, except earnings per share)

			Korea	an wor	n		Translation ii (No	nto U. te 2)	S. dollar
	Notes		2018		2017		2018		2017
Operation revenue Operation expenses	20,26 21,22,26	₩	2,672,412 1,611,447	₩	2,477,840 1,608,374	\$	2,390,137 1,441,238	\$	2,216,117 1,438,489
Operating income			1,060,965		869,466		948,899		777,628
Financial income Financial costs Other non-operating income Other non-operating expenses	4,23 4,23 23 23		235,881 441,996 808,348 81,920		17,953 168,267 39,862 115,778		210,966 395,310 722,966 73,267		16,057 150,494 35,652 103,549
Income from continuing operations before income tax expense			1,581,278		643,236		1,414,254		575,294
Income tax expense from continuing operations	24		158,584		39,133		141,833		35,000
Net income from continuing operations			1,422,694		604,103		1,272,421		540,294
Gain from discontinued operation	27		30,937		8,018		27,669		7,171
Net income		₩	1,453,631	₩	612,121	<u>\$</u>	1,300,090	<u>\$</u>	547,465
Other comprehensive income (loss): Items not to be reclassified to profit or loss in subsequent periods: Remeasurement loss on defined benefit plans Net gain on valuation of financial instruments measured at FVOCI Items to be reclassified to profit or	15 7		(14,879) 212		(1,088) -		(13,307) 190		(973) -
loss in subsequent periods: Net gain on available-for-sale financial assets	7		(14,667)		3,414 2,326		- (13,117)		3,053 2,080
Total comprehensive income		₩	1,438,964	₩	614,447	\$	1,259,304	\$	542,374
Earnings per share (Korean won and U.S. dollar): Basic earnings per share Basic earnings per share from continuing operations	25	₩	25,988 25,434	₩	10,924 10,781	\$	23.24 22.75	\$	9.77 9.64

The accompanying notes are an integral part of the separate financial statements.

SK Holdings Co., Ltd. Separate statements of changes in shareholders' equity for the years ended December 31, 2018 and 2017 (Korean won in millions)

million
n in r
an wo
(Korea

	_	lsened canital	Other	Other naid-in canital	Rota	Retained earnings		Other capital	Total equity
As at January 1, 2017	₩	15.385	A N	4.719.052	A N	0	₩	8.041 W	11,925,701
Total comprehensive income:									
Net income				,		612,121			612,121
Remeasurement loss on defined benefits plans						(1,088)			(1,088)
Net gain on available-for-sale financial assets				'		` ı		3,414	3,414
Dividends				'		(208,666)			(208,666)
Stock option		ı		1,220		` 1			1,220
Acquistion of treasury shares				(1)					(1
As at December 31, 2017	≱	15,385	₩	4,720,271	₩	7,585,590	₩	11,455 W	12,332,701
As at January 1, 2018	₿	15,385	₩	4,720,271	₩	7,585,590	₩	11,455 W	12,332,701
Effect of changes in accounting policies		•		•		1,156		(13,696)	(12,540)
As at January 1, 2018 (After revisions)		15,385		4,720,271		7,586,746		(2,241)	12,320,161
Total comprehensive income:									
Net income		•		•		1,453,631		I	1,453,631
Remeasurement loss on defined benefits plans		•		•		(14,879)			(14,879)
Net gain on valuation of financial assets measured at FVOCI		•		•				212	212
Dividends		•		•		(281,971)			(281,971)
Business combinations				(310,603)		•			(310,603)
Stock option		•		1,586		•		•	1,586
Acquistion of treasury shares		•		(1)		•		•	(1)
As at December 31, 2018	A	15.385	AH.	4.411.253	AV	8.743.527	£₩A	(2.029)	13,168,136

(Continued)

SK Holdings Co., Ltd. Separate statements of changes in shareholders' equity for the years ended December 31, 2018 and 2017 (cont'd) (U.S. dollar in thousands)

								Other capital	
		Issued capital	Other pa	Other paid-in capital	Retai	Retained earnings		components	Total equity
As at January 1, 2017	÷	13,760	÷	4,220,599	÷	6,424,491	ŝ	7,192 \$	10,666,042
Total comprehensive income:									
Net income		•		•		547,465		•	547,465
Remeasurement loss on defined benefits plans		•		•		(673)			(613)
Net gain on available-for-sale financial assets		•		•		•		3,053	3,053
Dividends		•		•		(186,626)			(186,626)
Stock option		•		1,091		•			1,091
Acquistion of treasury shares		•		(1)					(1)
As at December 31, 2017	θ	13,760	÷	4,221,689	÷	6,784,357	θ	10,245 \$	11,030,051
As at January 1, 2018	\$	13,760	လ	4,221,689	\$	6,784,357	÷	10,245 \$	11,030,051
Effect of changes in accounting policies		•		•		1,034		(12,251)	(11,215)
As at January 1, 2018 (After revisions)		13,760		4,221,689		6,785,391		(2,006)	11,018,836
Total comprehensive income:									
Net income		•		'		1,300,090		I	1,300,090
Remeasurement loss on defined benefits plans		•		•		(13,306)			(13,307)
Net gain on valuation of financial assets measured at FVOCI		•		•		•		190	190
Dividends		•		•		(252,188)		ı	(252,188)
Business combinations		•		(277,794)					(277,795)
Stock option		•		1,418				•	1,418
Acquistion of treasury shares		•		(1)				•	(1)
As at December 31, 2018	ω	13,760	\$	3,945,312	\$	7,819,987	φ	(1,816) \$	11,777,243

The accompanying notes are an integral part of the separate financial statements.

SK Holdings Co., Ltd. Separate statements of cash flows for the years ended December 31, 2018 and 2017 (Korean won in millions and U.S. dollar in thousands)

			Korea	an w	on	Translation in (Not		.S. dollar
	Notes		2018		2017	2018	. /	2017
Cash flows from operating activities:								
Net income		₩	1,453,631	₩	612,121	\$ 1,300,090	\$	547,465
Non-cash adjustments	28		(1,179,061)		(334,001)	(1,054,522)		(298,722)
Working capital adjustments	28		(105,755)		(18,355)	(94,585)		(16,416)
Interest received			6,565		4,616	5,872		4,128
Interest paid			(155,667)		(169,588)	(139,225)		(151,675)
Dividends received			830,877		691,840	743,115		618,764
Income taxes paid			(45,271)		(44,865)	(40,489)		(40,126)
Net cash provided by operating activities			805,319		741,768	720,256		663,418
Cash flows from investing activities:								
Decrease in short-term and long-term financial instruments, net			(84,975)		(5,876)	(75,999)		(5,255)
Increase in short-term loans			(04,973)		203	(10,000)		(3,233)
Proceeds from disposal of long-term investment securities			55,348		205	49,502		102
Proceeds from disposal of available-for-sale financial assets			55,540		418	43,302		374
Proceeds from disposal of investments in subsidiaries			- 223.726		12.344	- 200.095		11.040
Proceeds from disposal of investments in associates			7,103		5,001	6,353		4,473
Proceeds from disposal of property, plant and equipment			308.722		1,312	276.113		1,173
Proceeds from disposal of intangible assets			5,629		3,030	5,034		2,710
			,		3,030	,		2,710
Acquisition of long-term investment securities			(107,878)		-	(96,483)		-
Acquisition of available-for-sale financial assets			-		(46,724)	-		(41,789)
Acquisition of investments in subsidiaries			(1,090,393)		(1,126,050)	(975,220)		(1,007,110)
Acquisition of investments in associates			(155,691)		(496,876)	(139,246)		(444,393)
Acquisition of property, plant and equipment			(59,238)		(60,961)	(52,981)		(54,522)
Acquisition of intangible assets			(39,146)		(32,243)	(35,011)		(28,837)
Increase in guarantee deposits			(10,353)		(1,920)	(9,259)		(1,717)
Increase in derivatives			-		(2,430)	-		(2,173)
Business transfer			187,970		-	168,116		-
Cash inflows from business combinations			4		-	4		-
Net cash used in investing activities			(759,172)		(1,750,772)	(678,982)		(1,565,844)
Cash flows from financing activities:								
Increase in short-term borrowings, net			130,000		500,000	116,269		447,187
Issuance of bonds payable			1,195,213		1,394,481	1,068,968		1,247,188
Repayment of current portion of long-term debt			(1,050,000)		(750,000)	(939,093)		(670,781)
Payment of dividends			(281,973)		(208,666)	(252,189)		(186,626)
Net cash provided by (used in) financing activities	28		(6,760)		935,815	(6,045)		836,968
Net increase (decrease) in cash and cash equivalents			39,387		(73,189)	35,229		(65,458)
Net foreign exchange effects			(11)		(1,292)	(11)		(1,157)
Cash and cash equivalents at the beginning of the year			84,482		158,963	75,557		142,172
Cash and cash equivalents at the end of the year		₩	123,858	₩	84,482	\$ 110,775	\$	75,557

The accompanying notes are an integral part of the separate financial statements.

1. Corporate information

SK Holdings Co., Ltd. (the "Company") was established on April 13, 1991, and has been engaged in providing systems integration, software design and development, information processing and consulting services, and is headquartered at 26, Jong-ro, Jongno-gu, Seoul. The Company's ordinary shares have been listed on the Korea Exchange since November 11, 2009.

Upon the acquisition of SK Holdings Co., Ltd. by SK C&C Co., Ltd. effective on August 1, 2015, the Company added the investment business to its existing operations for the purpose of holding the securities of its subsidiaries. Furthermore, the Company changed its name to its current form as at the acquisition date.

As at December 31, 2018, the issued capital of the Company amounts to \$15,385 million (including \$113 million of preferred shares). Major shareholders and their equity ownership are Tae-won Chey, National Pension Service and Ki-won Choi, each holding 18.44%, 8.34% and 7.27% respectively, as at December 31, 2018.

2. Summary of significant accounting policies

The Company maintains its official accounting records in Korean won and prepares the separate financial statements in conformity with Korean International Financial Reporting Standards ("KIFRS"), in the Korean language. Accordingly, these separate financial statements are intended for use by those who are informed about KIFRS and Korean practices. The accompanying separate financial statements have been restructured and translated into English with certain expanded descriptions from the Korean language financial statements. Certain information included in the Korean language separated financial statements, but not required for a fair presentation of the Company's separate financial position, comprehensive income, changes in shareholder's equity or cash flows is not presented in the accompanying separate financial statements.

The accompanying separate financial statements are stated in Korean won, the currency of the country in which the Company is incorporated and operates. The translation of Korean won amounts into U.S. dollar amounts is included solely for the convenience of readers of the separate financial statements and has been made at the rate of W1,118.1 to USD 1.00, the basic exchange rate in the Seoul Money Brokerage Service for cable transfers in Korean won on the last business day of the year ended December 31, 2018. Such translations into U.S. dollar should not be construed as representations that the Korean won amounts could be converted into U.S. dollar at that or any other rate.

2.1 Basis of preparation

The Company has prepared the statutory separate financial statements in accordance with KIFRS. This financial statement is the separate financial statements by KIFRS 1027.

The significant accounting policies used for the preparation of the accompanying separate financial statements as at and for the year ended December 31, 2018, are the same as the accounting policies adopted for the preparation of separate financial statements as at and for the year ended December 31, 2017, except for adoption of new and revised KIFRSs applied in the current period, which are summarized below.

The accompanying separate financial statements have been prepared on a historical cost basis, except for certain non-current assets and financial instruments that are measured at fair value. Historical cost is based on the fair values of the consideration given.

The accompanying separate financial statements were approved at the Company's Board of Directors' meeting on February 12, 2019.

The principal accounting policies are set out below:

The Company has applied amendments to KIFRS issued that are mandatorily effective for accounting periods beginning on or after January 1, 2018.

KIFRS 1028 - Investments in Associates and Joint Ventures (Amendment)

The amendments clarify that an entity that is a venture capital organization, or other qualifying entity, may elect, at initial recognition on an investment-by-investment basis, to measure its investments in associates and joint ventures at fair value through profit or loss. The amendment does not have a significant impact on the financial statements.

KIFRS 1040 - Investment Property (Amendment)

The amendments clarify that a transfer to, or from, investment property necessitates an assessment of whether a property meets, or has ceased to meet, the definition of investment property, supported by observable evidence that a change in use has occurred. The amendments further clarify that situations other than the ones listed in K-IFRS 1040 may evidence a change in use, and that a change in use is possible for properties under construction (i.e. a change in use is not limited to completed properties). The application of K-IFRS 1040 has not had a significant impact on the Company's financial position or management performance.

KIFRS 1102 - Share-based Payment (Amendment)

The amendments include: 1) when measuring the fair value of share-based payment, the effects of vesting and non-vesting conditions on the measurement of cash-settled share-based payment should be consistent with the measurement of equity-settled share-based payment, 2) Share-based payment transaction in which the Company settles the share-based payment arrangement net by withholding a specified portion of the equity instruments per statutory tax withholding requirements would be classified as equity-settled in its entirety, if otherwise would be classified as equity-settled without the net settlement feature, and 3) when a cash-settled share-based payment changes to an equity-settled share-based payment because of modifications of the terms and conditions, the original liability recognized is derecognized and the equity-settled share-based payment is recognized at the modification date fair value. Any difference between the carrying amount of the liability at the modification date and the amount recognized in equity at the same date would be recognized in profit and loss immediately. The application of K-IFRS 1102 has not had a significant impact on the Company's financial position or management performance.

KIFRS 1109 - Financial Instruments

The Company applied the amendments to KIFRS 1109 and other standards for the first time for the year beginning on January 1, 2018. The Standard replaces KIFRS 1039 Financial Instruments: Recognition and Measurement. KIFRS 1109 introduces new rules for the classification and measurement of financial assets and financial liabilities, impairment of financial assets, and hedge accounting.

The Company has recognized the cumulative effect of the initial application of this standard in the opening balances in accordance with the transitional provisions of KIFRS 1109, and the comparative financial statements have not been restated. Accordingly, the comparative financial statements are presented in accordance with the previous accounting policies.

The major impact of the adoption of the standard on the Company's financial statements is as follows:

① Classification and measurement of financial assets

Classification of financial assets under KIFRS 1109 is driven by the entity's business model for managing financial assets and their contractual cash flows. This contains three principal classification categories: financial assets measured at amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL). Derivatives embedded in contracts where the host is a financial asset are never bifurcated. Instead, the hybrid financial instrument as a whole is assessed for classification.

② Impairment of financial assets

KIFRS 1109 sets out a new 'expected credit loss' (ECL) impairment model which replaces the 'incurred loss' model under KIFRS 1039 for recognizing and measuring impairment. On the other hand, the Company measures the allowance for losses on trade and other receivables, contracts and lease receivables at amounts equivalent to the life time expected credit losses and applies a practical expedient by considering low credit risk at the reporting date as no significant increase in credit risk. The requirement does not have a significant impact on the Company's financial position or management performance.

③ Hedge accounting

The new general hedge accounting requirements retain the three types of hedge accounting. However, greater flexibility has been introduced to the types of transactions eligible for hedge accounting, specifically broadening the types of instruments that qualify for hedging instruments and the types of risk components of non-financial items that are eligible for hedge accounting. In addition, the effectiveness test has been replaced with the principle of an 'economic relationship'. Retrospective assessment of hedge effectiveness is also no longer required. Enhanced disclosure requirements about the Company's risk management activities have also been introduced. The requirement does not have a significant impact on the Company's financial position or management performance.

④ Financial effects as a result of the first application of KIFRS 1109

Changes in the basic capital of the Company as a result of the first application of KIFRS 1109 are as follows (Korean won in millions):

Amendments		Retained earnings	Ot	her capital components
Classification and measurement	₩	1,165	₩	(13,696)

Details of reclassification of financial assets based on the initial application of KIFRS 1109 are as follows (Korean won in millions):

	Classi	fication			Book value		
	KIFRS 1039	KIFRS 1109	KIFF	RS 1039	KIFRS 1109	Dif	ference
Current financial assets:							
Cash and cash equivalents	Loans and receivables	Amortized cost	₩	84,482	₩ 84,482	2₩	-
Short-term financial instruments	Loans and receivables	Amortized cost		43,516	43,510	6	-
Trade accounts receivable	Loans and receivables	Amortized cost		399,748	399,748	В	-
Other accounts receivable	Loans and receivables	Amortized cost		1,767	1,76	7	-
Accrued income	Loans and receivables	Amortized cost		112	11:	2	-
Guarantee deposits	Loans and receivables	Amortized cost		1		1	-
Derivative financial assets	Financial assets	FVTPL					
	at FVTPL			599	599	9	-
				530,225	530,22	5	-
Non-current financial assets:							
Long-term financial instruments	Loans and receivables	Amortized cost		19	19	9	-
Long-term investment securities (*1)	Available-for-sale financial asset	FVTPL		73,654	60,08	C	(13,574)
Long-term investment	Available-for-sale	FVOCI		5,330	2,373	3	(2,957)
securities (*2)	financial asset						
Long-term loans	Loans and receivables	Amortized cost		397	39	7	-
Guarantee deposits	Loans and receivables	Amortized cost		10,829	10,829	9	-
Derivative financial assets (*1)	Financial assets	FVTPL					
	at FVTPL			3,015	47	7	(2,538)
Long-term investment	Financial assets	FVTPL					
securities (*1)	at FVTPL			-	2,53		2,538
				93,244	76,71	3	<u>(16,531</u>)
			₩	623,469	₩ 606,938	<u>8</u> ₩	<u>(16,531</u>)

(*1) As at 1 January 2018, the date of initial application of KIFRS 1109, available-for-sale financial assets such as beneficiary certificates and equity investments amounting to ₩47,160 million were reclassified to financial assets measured at FVTPL.

In accordance with the Prohibition on Separation of Embedded Derivatives, available-for-sale financial assets of W12,920 million and derivative assets of W2,538 million related to convertible bonds were reclassified to financial assets measured at FVTPL. As the contractual terms of these assets do not give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, these assets were not qualified to be designated as financial assets measured at amortized cost. As a result of this reclassification, as at January 1, 2018, accumulated OCI of W11,455 million was reclassified to retained earnings and, due to its new classification to financial assets measured at FVTPL, retained earnings were decreased by W10,290 million.

(*2) As at 1 January 2018, the date of initial application of KIFRS 1109, available-for-sale financial assets such as marketable equity instruments amounting to ₩2,373 million were reclassified to equity investments measured at FVOCI. As a result, other comprehensive income decreased by ₩2,241 million (after the income tax effect) due to fair value assessment. The Company designated equity instruments that are not held for trading as FVOCI on initial application of KIFRS 1109 with no subsequent recycling of amounts from OCI to profit and loss.

KIFRS 1115 - Revenue from Contracts with Customers

In the current year, the Company has applied K-IFRS 1115 Revenue from Contracts with Customers which is effective for an annual period that begins on or after January 1, 2018. K-IFRS 1115 introduced a 5-step approach to revenue recognition. Far more prescriptive guidance has been added in K-IFRS 1115 to deal with specific scenarios. Details of the new requirements as well as their impact on the Company's separate financial statements are described below.

The Company has applied K-IFRS 1115 in accordance with the fully retrospective transitional approach using the expedient in K-IFRS 1115 allowing both non-disclosure of the amount of the transaction price allocated to the remaining performance obligations, and an explanation of when it expects to recognize that amount as revenue for all reporting periods presented before the date of initial application, i.e. January 1, 2018.

The major impact of the adoption of the standard on the Company's financial statements is as follows:

① Identification of the separate performance obligations in the contract

Through the ownership of equity interests in subsidiaries, the Company is engaged in investment service that governs the business of the subsidiaries and the IT services business, which provides consulting services related to the information and communications business.

For IT services, multiple contractual obligations can be identified in a single contract. In such cases, the transaction price should be allocated to each performance obligation, and the revenue should be recognized for each obligation to perform.

② Allocation of the transaction price to the separate performance obligations

In accordance with KIFRS 1115, the Company should allocate the transaction price to each performance obligation in a contract in proportion to its stand-alone selling price. To estimate the transaction price to each performance obligation, the Company will use the 'adjusted market assessment approach'. However, in some circumstances, the 'expected cost plus a margin approach' will be used.

③ Financial effects as a result of the first application of KIFRS 1115

Upon first application of KIFRS 1115, beginning balance of retained decreased by ₩9 million.

Changes in the financial statements as at December 31, 2018 as a result of the first application of KIFRS 1115 are as follows (Korean won in millions):

(A) Separate statements of financial position

	_	Before application of KIFRS 1115		Amendments	/	After application of KIFRS 1115
Trade accounts receivable	₩	492,756	₩	(530)₩	492,226

(B) Separate statements of income

	I	Before application of KIFRS 1115		Amendments	After app of KIFR	
Sales	₩	2,672,942	₩	(530)	₩	2,672,412
Cost of sales		1,611,447		-		1,611,447
Oprerating income		1,061,495		(530)		1,060,965
Non-operating income and exper	ises	520,313		-		520,313
Income tax expense		158,730		(146)		158,584
Net income from continuing operations		1,423,078		(384)		1,422,694
Gain from discontinued operation		30,937		-		30,937
Net income		1,454,015		(384)		1,453,631

(C) Separate statements of cash flow

The adoption of KIFRS 1115 does not have a significant effect on the total cash flows of each operating activities, investment activities and financial activities.

KIFRS 2122 - Foreign Currency Transactions and Advance Consideration

The interpretation clarifies that, in determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability relating to advance consideration, the date of the transaction is the date on which an entity initially recognizes the non-monetary asset or non-monetary liability arising from the advance consideration. If advance consideration is taken at multiple times, it is necessary to determine the date of each transaction due to the advance consideration. The adoption of the above amendments do not have a material impact on the Company's financial position or management performance.

2.1.2 New and revised KIFRSs issued, but not yet effective

The Company has not applied the following new and revised KIFRSs that have been issued, but are not yet effective.

KIFRS 1019 - Employee Benefits (Amendment)

The amendments to KIFRS 1019 address the accounting when a plan amendment, curtailment or settlement occurs during a reporting period. The amendments specify that when a plan amendment, curtailment or settlement occurs during the annual reporting period, an entity is required to:

- Determine current service cost for the remainder of the period after the plan amendment, curtailment or settlement, using the actuarial assumptions used to remeasure the net defined benefit liability (asset) reflecting the benefits offered under the plan and the plan assets after that event
- Determine net interest for the remainder of the period after the plan amendment, curtailment or settlement using: the net defined benefit liability (asset) reflecting the benefits offered under the plan and the plan assets after that event; and the discount rate used to remeasure that net defined benefit liability (asset).

The amendments also clarify that an entity first determines any past service cost, or a gain or loss on settlement, without considering the effect of the asset ceiling. This amount is recognised in profit or loss. An entity then determines the effect of the asset ceiling after the plan amendment, curtailment or settlement. Any change in that effect, excluding amounts included in the net interest, is recognised in other comprehensive income.

The amendments apply to plan amendments, curtailments, or settlements occurring on or after the beginning of the first annual reporting period that begins on or after January 1, 2019, with early application permitted. These amendments will apply only to any future plan amendments, curtailments, or settlements of the Company.

2.1.2 New and revised KIFRSs issued, but not yet effective (cont'd)

KIFRS 1028 - Investments in Associates and Joint Ventures (Amendment)

The amendments clarify that an entity applies KIFRS 1109 to long-term interests in an associate or joint venture to which the equity method is not applied but that, in substance, form part of the net investment in the associate or joint venture (long-term interests). This clarification is relevant because it implies that the expected credit loss model in KIFRS 1109 applies to such long-term interests. The amendments also clarified that, in applying KIFRS 1109, an entity does not take account of any losses of the associate or joint venture, or any impairment losses on the net investment, recognised as adjustments to the net investment in the associate or joint ventures. The amendments should be applied retrospectively and are effective from January 1, 2019, with early application permitted. The Company reviews the effect of the amendments on the separate the financial statements and will apply the amendments on the effective date.

KIFRS 1109 - Financial Instruments (Amendment)

Under KIFRS 1109, a debt instrument can be measured at amortised cost or at fair value through other comprehensive income, provided that the contractual cash flows are 'solely payments of principal and interest on the principal amount outstanding' (the SPPI criterion) and the instrument is held within the appropriate business model for that classification. The amendments to KIFRS 1109 clarify that a financial asset passes the SPPI criterion regardless of the event or circumstance that causes the early termination of the contract and irrespective of which party pays or receives reasonable compensation for the early termination of the contract. The amendments should be applied retrospectively and are effective from January 1, 2019, with earlier application permitted. The Company reviews the effect of the amendments on the separate financial statements and will apply the amendments on the effective date.

KIFRS 1116 - Leases

KIFRS 1116 Leases is effective for annual periods beginning on or after January 1, 2019. Early application is permitted. This standard replaces KIFRS 1017 *Leases*, KIFRS 2104 *Determining whether an Arrangement contains a Lease*, KIFRS 2015 *Operating Leases-Incentives* and KIFRS 2027 *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*.

The Company shall identify at the time of the agreement whether the contract itself is a lease or whether the contract includes a lease. However, the Company will apply KIFRS 1116 only to contracts signed (or changed) on or after the date of initial application by selecting a practical expedient.

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

A lessee will recognize an asset representing the right to use the underlying asset during the lease term (i.e., the right-of-use asset) and a liability representing the right to make lease payments (i.e., the lease liability). However, in case of short-term leases (i.e., leases with a lease term of 12 months or less at the commencement date) and leases of 'low-value' assets, the Company may elect to apply the exception under KIFRS 1116. As a practical expedient, a lessee may elect, by class of the underlying asset, not to separate non-lease components from lease components, and instead account for each lease component and any associated non-lease components as a single component.

Lessor accounting under KIFRS 1116 is not significantly changed from current accounting under KIFRS 1017.

2.1.2 New and revised KIFRSs issued, but not yet effective (cont'd)

In relation to sale and leaseback transactions, the Company (the seller-lessee) will apply the requirements of KIFRS 1115 to determine whether the transfer of an asset is accounted for as a sale of the asset. However, the Company does not reassess sale and leaseback transactions entered into before the date of initial application.

1) Lease accounting for lessees

As a lessee, the Company can either apply the KIFRS 1008 using a full retrospective approach; or modified retrospective approach. The full retrospective approach requires the Company to retrospectively apply the new standard to each prior reporting period presented, while modified retrospective approach requires the lessee to recognize the cumulative effect of initial application at the date of initial application of the new leases standard.

The Company plans to apply KIFRS 1116 initially on January 1, 2019 by using the modified retrospective approach. Therefore, the cumulative effect of adopting KIFRS 1116 will be recognized as an adjustment to the opening balance of retained earnings at January 1, 2019 with no restatement of comparative information.

2 Lease accounting for lessors

In case where the Company is lessor, the Company should reassess leases that were classified as operation leases applying KIFRS 1017 and are ongoing at the date of initial application, whether each sublease should be classified as an operating lease or a finance lease, they are accounted as new finance lease contracted on the initial application date of KIFRS 1116.

On the other hand, as at the end of the current term, the Company enters into an operating lease contract about real estate rental and some property, plant and equipment. And the requirements of the KIFRS to recognize the license asset and the related liability are expected to have a significant effect on the amount recognized in the separate financial statements. Thus the Company is currently analyzing the potential effect of that Standard.

IFRIC Interpretation 2123 - Uncertainty over Income Tax Treatment

The Interpretation addresses the accounting for income taxes when tax treatments involve uncertainty that affects the application of KIFRS 1012 and does not apply to taxes or levies outside the scope of KIFRS 1012, nor does it specifically include requirements relating to interest and penalties associated with uncertain tax treatments. The Interpretation specifically addresses the following:

- > Whether an entity considers uncertain tax treatments separately
- > The assumptions an entity makes about the examination of tax treatments by taxation authorities
- How an entity determines taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates
- How an entity considers changes in facts and circumstances

The Company has to determine whether to consider each uncertain tax treatment separately or together with one or more other uncertain tax treatments. The approach that better predicts the resolution of the uncertainty should be followed. The interpretation is effective for annual reporting periods beginning on or after January 1, 2019, but certain transition reliefs are available.

2.2 Business combinations

Businesses combinations are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the fair values of the assets transferred by the Company, liabilities incurred by the Company to the former owners of the acquiree and the equity interests issued by the Company in exchange for control of the acquiree. Acquisition-related costs are generally recognized in profit or loss as incurred.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Company re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognized at the acquisition date. If the re-assessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognized in profit or loss.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Company reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see above), or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date.

2.3 Current versus non-current classification

The Company presents assets and liabilities in the statement of financial position based on current/noncurrent classification.

An asset is current when it is:

- > Expected to be realized or intended to be sold or consumed in the normal operating cycle
- Held primarily for the purpose of trading
- > Expected to be realized within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in the normal operating cycle
- It is held primarily for the purpose of trading
- > It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Company classifies all other liabilities as non-current.

2.3 Current versus non-current classification (cont'd)

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

2.4 Foreign currencies

The separate financial statements are presented in the currency of the primary economic environment in which the Company operates (its functional currency). For the purpose of the separate financial statements, the results of operations and financial position of the Company are expressed in Korean won, which is the functional currency of the entity and the presentation currency for the separate financial statements.

In preparing the separate financial statements of the individual entities, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Non-monetary items that are measured in

Exchange differences are recognized in profit or loss in the period in which they arise, except for:

- Exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings, and
- > Exchange differences on transactions entered into in order to hedge certain foreign currency risks.

2.5 Cash and cash equivalents

Cash and cash equivalents include cash, bank balances and short-term highly liquid investments with an original maturity of three months or less.

2.6 Financial assets

2.6.1 Classification

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

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

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

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

For investments in equity instruments that are not held for trading, this will depend on whether the Company has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income.

2.6.2 Measurement

Non-derivatives financial assets with fixed or determinable payments and fixed maturity dates that the Company has the positive intent and ability to hold to maturity are classified as held-to-maturity investments. Held-to-maturity investments are measured at amortized cost using the effective interest method, less any impairment, with revenue recognized on an effective yield basis.

2.6 Financial assets (cont'd)

(1) Debt instruments

Subsequent measurement of debt instruments depends on the Company's business model for managing the asset and the cash flow characteristics of the asset. The Company classifies its debt instruments into one of the following three measurement categories:

1) Financial assets measured at amortized cost

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

2) Financial assets measured at FVOCI

Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at fair value through other comprehensive income. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment loss (reversal of impairment loss), interest income and foreign exchange gains and losses which are recognized in profit or loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss. Interest income from these financial assets is included in 'finance income' using the effective interest rate method. Foreign exchange gains and losses are presented in 'finance income or expenses' and impairment losses are presented in 'finance expenses'.

3) Financial assets measured at FVTPL

Assets that do not meet the criteria for amortized cost or fair value through other comprehensive income are measured at fair value through profit or loss. A gain or loss on a debt investment that is subsequently measured at fair value through profit or loss and is not part of a hedging relationship is recognized in profit or loss and presented net in the statement of profit or loss within 'finance income or expenses' in the year in which it arises.

(2) Equity instruments

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

Changes in the fair value of financial assets at fair value through profit or loss are recognized in 'finance income and expenses' in the statement of profit or loss as applicable. Impairment loss (reversal of impairment loss) on equity investments measured at fair value through other comprehensive income are not reported separately from other changes in fair value

2.6.3 Impairment

The Company assesses on a forward looking basis the expected credit losses associated with its debt instruments carried at amortized cost and fair value through other comprehensive income. The impairment methodology applied depends on whether there has been a significant increase in credit risk. For trade receivables and lease receivables, the Company applies the simplified approach, which requires expected lifetime credit losses to be recognized from initial recognition of the receivables.

2.6 Financial assets (cont'd)

2.6.4 Recognition and Derecognition

Regular way purchases and sales of financial assets are recognized or derecognized on trade-date, the date on which the Company commits to purchase or sell the asset. Financial assets are derecognized when the rights to receive cash flows from the financial assets have expired or have been transferred and the Company has transferred substantially all the risks and rewards of ownership.

If a transfer does not result in derecognition because the Company has retained substantially all the risks and rewards of ownership of the transferred asset, the Company continues to recognize the transferred asset in its entirety and recognizes a financial liability for the consideration received.

2.6.5 Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount reported in the statements of financial position where there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the assets and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the Company or the counterparty.

2.7 Inventories

Inventories are valued at the lower of cost or net realizable value, with cost being determined using the first-in, first-out method or the specific identification method. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

The Company recorded valuation allowance on a periodic basis, when significant changes with an adverse effect (an oversupply, an obsolete or decline in the price of goods) on the entity have taken place during the period, or will take place in the near future, and loss from inventory revaluation is recognized as operating expenses.

2.8 Investments in subsidiaries, associates and joint ventures

Pursuant to KIFRS 1027 *Consolidated and Separate Financial Statements*, the accompanying separate financial statements are accounted for, by a parent or investor in an associate, on the basis of the direct equity interest rather than on the basis of the reported results and net assets of the investees. Moreover, KIFRS 1027 requires that, in the separate financial statements, investments in subsidiaries and associates should be accounted for at cost. All dividends should be recognized in profit or loss within separate financial statements has been established.

2.9 Property, plant and equipment

Construction in progress is stated at cost, net of accumulated impairment losses, and property, plant and equipment is stated at cost, less subsequent accumulated depreciation and accumulated impairment losses. The cost of an item of property, plant and equipment is directly attributable to its purchase or construction, which includes 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. It also includes the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent costs are recognized in the carrying amount of an asset or as a separate asset if it is probable that future economic benefits associated with the assets will flow into the Company and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

2.9 Property, plant and equipment (cont'd)

The Company does not depreciate land. Depreciation expense is computed using the straight-line method based on the estimated useful lives of the assets as follows:

Description	Useful lives (years)	Description	Useful lives (years)
Buildings	20 ~ 50	Vehicles	4, 10
Structures	20, 40	Others	4 ~ 25

The Company reviews the depreciation method, the estimated useful lives and residual values of property, plant and equipment at the end of each annual reporting period. If expectations differ from previous estimates, the changes are accounted for as a change in an accounting estimate.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on derecognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss in the period in which the property is derecognized.

2.10 Intangible assets

Intangible assets with finite useful lives that are acquired separately are carried at cost and intangible assets acquired in a business combination are carried at fair value at the acquisition date. Subsequently, intangible assets are carried at cost, less accumulated amortization and accumulated impairment losses.

The residual value of development cost and other intangible assets is estimated as nil ("0") and amortization of these is provided using the straight-line method over the estimated useful life of the assets. However, intangible assets with indefinite useful lives such as goodwill, membership and brand contract-related assets are not amortized as there is no foreseeable limit to the period over which the asset is expected to use.

Description	Useful lives (years)
Development cost	3 ~ 10
Others	5 ~ 10

The useful lives of intangible assets are assessed as either finite or indefinite. Intangible assets with finite lives are amortized over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at the end of each annual reporting period. If expectations differ from previous estimates, the changes are accounted for as a change in an accounting estimate. Intangible assets with indefinite useful lives are not amortized, but are tested for impairment annually.

Expenditures on research activities, undertaken with the prospect of gaining new scientific or 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 Company 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.

An intangible asset is derecognized on disposal or when no future economic benefits are expected from its use. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognized in profit or loss when the asset is derecognized.

2.11 Impairment of tangible and intangible assets

At the end of each reporting period, the Company reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash-generating unit ("CGU") to which the asset belongs.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually and whenever there is an indication that the asset may be impaired. Recoverable amount is the higher of fair value, less costs to sell, or value in use. If the recoverable amount of an asset (or a CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or the CGU) is reduced to its recoverable amount and the reduced amount is recognized in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or a CGU) is increased to the revised estimate of its recoverable amount, so that the increased carrying amount does

not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset (or the CGU) in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

2.12 Investment property

Investment properties are properties held to earn rentals and for capital appreciation. Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are reported at cost, less accumulated depreciation and accumulated impairment losses.

Subsequent costs are recognized in carrying amount of an asset or as a separate asset if it is probable that the future economic benefits associated with the assets will flow into the Company and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

While land is not depreciated, all other investment property is depreciated based on the respective asset's estimated useful lives ranging from 25 to 50 years using the straight-line method.

The Company reviews the depreciation method, the estimated useful lives and residual values of investment properties at the end of each annual reporting period. If expectations differ from previous estimates, the changes are accounted for as a change in accounting estimate.

2.13 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings, pending their expenditure on qualifying assets, is deducted from the borrowing costs eligible for capitalization. All other borrowing costs are recognized in profit or loss in the period in which they are incurred.

2.14 Non-current assets held for sale and discontinued operations

The Company classifies non-current assets (or disposal group) as held for sale if their carrying amounts will be recovered principally through a sale or distribution rather than through continuing use. Such noncurrent assets and disposal group classified as held for sale or as held for distribution are measured at the lower of their carrying amount and fair value less costs to sell or to distribute. Costs to distribute are the incremental costs directly attributable to the disposal of an asset (or disposal group), excluding the finance costs and income tax expense.

The criteria for held for distribution classification is regarded as met only when the distribution is highly probable and the asset or disposal group is available for immediate distribution in its present condition. Actions required to complete the distribution should indicate that it is unlikely that significant changes to the distribution will be made or that the decision to distribute will be withdrawn. Management must be committed to the distribution expected within one year from the date of the classification.

Property, plant and equipment and intangible assets are not depreciated or amortized once classified as held for sale or as held for distribution.

Assets and liabilities classified as held for sale or for distribution are presented separately as current items in the statement of financial position.

A disposal group qualifies as discontinued operation if it is a component of an entity that either has been disposed of, or is classified as held for sale, and:

- Represents a separate major line of business or geographical area of operations
- Is part of a single co-ordinated plan to dispose of a separate major line of business or geographical area of operations, or
- Is a subsidiary acquired exclusively with a view to resale

Discontinued operations are excluded from the results of continuing operations and are presented as a single amount as profit or loss after tax from discontinued operations in the statement of profit or loss and other comprehensive income. Additional disclosures are provided in Note 27. All other notes to the financial statements include amounts for continuing operations, unless otherwise mentioned.

2.15 Discount (premium) on bonds

Discount (premium) on bonds is presented as a direct deduction from (addition to) the nominal value of the bonds and is amortized using the effective interest rate method over the lives of the bonds.

2.16 Leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

2.17 Financial liabilities and equity instruments

2.17.1 Classification as debt or equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangement and the definitions of financial liability and an equity instrument.

2.17.2 Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognized as the proceeds are received, net of direct issue costs.

Repurchase of the Company's own equity instruments is recognized and deducted directly in equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Company's own equity instruments.

2.17.3 Compound instruments

The component parts of compound instruments (convertible bonds) issued by the Company are classified separately as financial liabilities and equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and equity instrument. Conversion option that will be settled by the exchange of a fixed amount of cash or another financial asset for a fixed number of the Company's own equity instruments is an equity instrument.

At the date of issue, the fair value of the liability component is estimated using the prevailing market interest rate for a similar non-convertible instrument. This amount is recorded as a liability on an amortized cost basis using the effective interest method until extinguished upon conversion or at the instrument's maturity date.

The conversion option classified as equity is determined by deducting the amount of the liability component from the fair value of the compound instrument as a whole. This is recognized and included in equity, net of income tax effects, and is not subsequently remeasured. In addition, the conversion option classified as equity will remain in equity until the conversion option is exercised, in which case, the balance recognized in equity will be transferred to share premium. No gain or loss is recognized in profit or loss upon conversion of the conversion option.

Transaction costs that relate to the issue of the convertible notes are allocated to liability and equity components in proportion to the allocation of the gross proceeds. Transaction costs relating to equity component are recognized directly in equity. Transaction costs relating to the liability component are included in the carrying amount of the liability component and are amortized over the lives of the convertible notes using the effective interest method.

2.17.4 Financial liabilities

All financial liabilities are measured subsequently at amortized cost using the effective interest method or at FVTPL. However, financial liabilities that arise when a transfer of a financial asset does not qualify for derecognition or when the continuing involvement approach applies, and financial guarantee contracts issued by the Company, are measured in accordance with the specific accounting policies set out below.

2.17.4.1 Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is (i) contingent consideration of an acquirer in a business combination, (ii) held for trading or (iii) it is designated as at FVTPL.

A financial liability is classified as held for trading if:

- > It has been acquired principally for the purpose of repurchasing it in the near term; or
- On initial recognition it is part of a portfolio of identified financial instruments that the Company manages together and has a recent actual pattern of short-term profit-taking; or
- > It is a derivative that is not designated and effective as a hedging instrument.

2.17 Financial liabilities and equity instruments (cont'd)

A financial liability other than a financial liability held for trading or contingent consideration of an acquirer in a business combination may be designated as at FVTPL upon initial recognition if:

- Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- The financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Company 's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- It forms part of a contract containing one or more embedded derivatives, and K-IFRS 1109 permits the entire combined contract to be designated as at FVTPL.

Financial liabilities at FVTPL are measured at fair value, with any gains or losses arising on changes in fair value recognized in profit or loss to the extent that they are not part of a designated hedging relationship

However, for financial liabilities that are designated as at FVTPL, the amount of change in the fair value of the financial liability that is attributable to changes in the credit risk of that liability is recognized in other comprehensive income, unless the recognition of the effects of changes in the liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss. The remaining amount of change in the fair value of liability is recognized in profit or loss. Changes in fair value attributable to a financial liability's credit risk that are recognized in other comprehensive income are not subsequently reclassified to profit or loss; instead, they are transferred to retained earnings upon derecognition of the financial liability.

Gains or losses on financial guarantee contracts issued by the Company that are designated by the Company as at FVTPL are recognized in profit or loss.

2.17.4.2 Financial liabilities measured at amortized cost

Financial liabilities that are not (a) contingent consideration of an acquirer in a business combination, (b) held-for-trading, or (c) designated as at FVTPL, are measured subsequently at amortized cost using the effective interest method.

2.17.5 Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due in accordance with the terms of debt instruments.

Financial guarantee contract liabilities are initially measured at their fair values and, if not designated as at FVTPL, are subsequently measured at the higher of:

- The amount of the loss allowance determined in accordance with IFRS 9 (see financial assets above); and
- > The amount recognized initially less, where appropriate, cumulative amortisation recognized in accordance with the revenue recognition policies set out above.

2.17.6 Derecognition of financial liabilities

Financial liabilities are removed from the statement of financial position when it is extinguished; for example, when the obligation specified in the contract is discharged or cancelled or expired or when the terms of an existing financial liability are substantially modified. The difference between the carrying amount of a financial liability extinguished or transferred to another party and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

2.18 Retirement benefit costs

Contributions to defined contribution retirement benefit plans are recognized as an expense when employees have rendered service entitling them to the contributions.

For defined benefit retirement benefit plans, the cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out at the end of each reporting period. Remeasurement, comprising actuarial gains and losses, the effect of the changes to the asset ceiling (if applicable) and the return on plan assets (excluding interest), is reflected immediately in the separate statement of financial position with a charge or credit recognized in OCI in the period in which it occurs. Remeasurement recognized in OCI is reflected immediately in retained earnings and will not be reclassified to profit or loss. Past service cost is recognized in profit or loss in the period of a plan amendment. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit liability or asset. Defined benefit costs are composed of service cost (including current service cost and past service cost, as well as gains and losses on curtailments and settlements), net interest expense (income) and remeasurement.

The Company presents the service cost and net interest expense (income) components in profit or loss, and the remeasurement component in OCI. Curtailment gains and losses are accounted for as past service costs.

2.19 Provision

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

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (where the effect of the time value of money is material).

At the end of each reporting period, the remaining provision balance is reviewed and assessed to determine if the current best estimate is being recognized. If the existence of an obligation to transfer economic benefit is no longer probable, the related provision is reversed during the period.

2.20 Revenue recognition

From January 1, 2018, the Company has applied KIFRS 1115 *Revenue from Contracts with Customers*. Revenue is measured at the fair value of the consideration received or receivable. Revenue is reduced for estimated customer returns, rebates and other similar allowances. The Company recognizes revenue when the amount of revenue can be reliably measured; when it is probable that the future economic benefits will flow to the entity; and when specific criteria have been met for each of the Company's activities, as described below:

2.20.1 Dividends income

The main purpose of the Company's business is to instruct, govern and give management guidance to its subsidiaries and others by acquiring their shares. Dividend income from subsidiaries is recognized when the right to receive the dividend as a shareholder is established and is included in operating revenue.

2.20.2 Trademark usage income

Trademark usage income is recognized in accordance with the related arrangements over the term of the use of the trademark.

2.20.3 Rendering of services

The Company provide customized system construction, system operation, maintenance and repair services. For system construction services, revenue is recognized over time at the rate of progress under the input method because the Company has no alternative use for completing the obligation for the assets created by the Company that have completed the performance so far, and because the Company has a enforceable right to payment for the completed performance.

In the case of providing system operation, maintenance and repair services, the Company is obliged to provide the customer with the related services during the contract period, so the transaction price allocated to the performance obligation is recognized as revenue over the period where the services are provided.

2.20.4 Contract assets and liabilities

A contract asset is the right to consideration in exchange for goods or services transferred to the customer. If the Company performs by transferring goods or services to a customer before the customer pays consideration or before payment is due, a contract asset is recognised for the earned consideration that is conditional.

A contract liability is the obligation to transfer goods or services to a customer for which the Company has received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before the Company transfers goods or services to the customer, a contract liability is recognised when the payment is made or the payment is due (whichever is earlier). Contract liabilities are recognised as revenue when the Company performs under the contract.

2.20.5 Sale of goods

Revenue from sale of goods is recognized when control have passed to the buyer, usually on delivery of the goods.

2.21 Income tax

Income tax expense represents the sum of the tax currently payable and deferred tax. Current and deferred tax are recognized in profit or loss, except when they relate to items that are recognized in OCI or directly in equity, in which case, the current and deferred tax are also recognized in OCI or directly in equity.

2.21.1 Current tax

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit as reported in the separate statement of profit or loss and comprehensive income because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Company's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

2.21.2 Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the separate financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences to the extent it is probable that taxable profits will be available against which those deductible temporary differences can be utilized. Such deferred tax assets and liabilities are not recognized if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

2.21.2 Deffered tax (cont'd)

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates and interests in joint ventures, except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent it is probable that there will be sufficient taxable profits against which the benefits of the temporary differences can be utilized and they are expected to reverse in the foreseeable future. The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset realized, 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 assets reflects the tax consequences that would follow from the manner in which the Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset if, and only if, the Company has a legally enforceable right to set off current tax assets against current tax liabilities, and the deferred tax assets and liabilities relate to income taxes are levied by the same taxation authority on either the same taxable entity or different taxable entities that intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

2.21.3 Current tax and deferred tax for the year

Current tax and deferred tax are recognized in profit or loss, except when they relate to items that are recognized in OCI or directly in equity, in which case the current tax and deferred tax are also recognized in OCI or directly in equity. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

2.22 Earnings per share

Basic earnings per share (EPS) amounts are calculated by dividing net income attributable to ordinary equity holders of the Company by the weighted average number of ordinary shares outstanding during the year.

2.23 Fair value

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Company takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date.

Fair value for measurement and/or disclosure purposes in these separate financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of KIFRS 1102 *Share-based Payment*; leasing transactions that are within the scope of KIFRS 1017 *Leases*; and measurements that have some similarities to fair value, but are not fair value, such as net realisable value in KIFRS 1002 *Inventories* or value in use in KIFRS 1036 *Impairment of Assets*

In addition, for financial reporting purposes, fair value measurements are categorized into Level 1, 2 or 3, based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1: inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2: inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- > Level 3: inputs are unobservable inputs for the asset or liability.

2.24 Operating segment

In accordance with KIFRS 1108 provided an exemption from segment reporting in the separate financial statements of the parent, the Company disclosed its information of operating segment in the separate financial statements.

3. Significant accounting judgements, estimates and assumptions

When preparing the separate financial statements, management is required to make judgments, estimates and assumptions that affect the reported amount of assets, liabilities, revenues and expenses. Actual results may be different from those estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods if the revision affects both current and future periods.

The following are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year:

3.1 Impairment of non-financial assets

The Company assesses, at each reporting date, whether there is an indication of impairment of its nonfinancial assets. If any indication exists, or annually, intangible assets with indefinite useful lives including brand contract-related asset are tested for impairment. Other non-financial assets are tested for impairment when there is an indication that the carrying amount of an asset is not recoverable. In assessing value in use, management estimates future cash flows of the assets or CGU and determines an appropriate discount rate to calculate the present value of the estimated future cash flows.

3.2 Valuation of financial instruments

Subsequent to initial recognition, investment securities and others are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss or OCI. Where the fair value of financial assets and financial liabilities recorded in the separate statements of financial position cannot be derived from active markets, the Company uses valuation techniques that require the management's judgments on the expected future cash flows and discount rates.

3.3 Bad debt allowance for trade receivables, loans and other receivables

The Company estimates a bad debt allowance for trade receivables, loans and other receivables, based on the aging of accounts receivables and past experience of bad debt, as well as observable changes in economic and industrial conditions that correlate with default on receivables.

3.4 Measurement and useful lives of tangible and intangible assets

If the Company acquires property and equipment or intangible assets from business combination, it is required to estimate the fair value of these assets at the acquisition date. For estimating the useful lives of tangible and intangible assets, significant management judgment is required.

3.5 Defined benefit plan

The Company's defined benefit obligation is determined based on the actuarial valuation carried out at the end of each annual reporting period. Actuarial assumptions are the Company's best estimates of the variables in determining the cost of providing post-retirement benefits, such as discount rates, rates of expected future salary increases and mortality rates. Significant estimation uncertainty is likely to persist in making such assumptions due to the long-term nature of post-retirement benefit plan.

3.6 Deferred tax assets

Recognition and measurement of deferred tax assets and liabilities requires significant management judgment. Especially, when determining if deferred tax assets will be realizable or not in the future, it involves significant management assumptions and judgment on the Company's future performance.

4. Financial instruments

4.1 Financial assets

Details of financial assets as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018							
	Financial assets measured at FVTPL	Financial assets measured at FVOCI	Financial assets measured at amortized cost	Total				
Current assets:				10101				
Cash and cash equivalents	₩ 73,491	₩ -	₩ 50,367	₩ 123,858				
Short-term financial instruments	96,271	-	32,220	128,491				
Trade accounts receivable (*1)	-	-	354,128	354,128				
Other accounts receivable	-	-	1,858	1,858				
Accrued income	-	-	118	118				
Guarantee deposits	-	-	112	112				
Derivative financial assets	34			34				
	169,796		438,803	608,599				
Non-current assets:								
Long-term financial instruments	-	-	19	19				
Long-term investment securities	162,475	232,216	394	395,085				
Long-term loans	-	-	397	397				
Long-term guarantee deposits	-	-	21,074	21,074				
Derivative financial assets	175,993			175,993				
	338,468	232,216	21,884	592,568				
	₩ 508,264	₩ 232,216	₩ 460,687	<u>₩ 1,201,167</u>				

(*1) Contract assets (unbilled receivables) amounting to #138,098 million as at December 31, 2018 are not included in the financial instruments.

	December 31, 2017							
	Financial assets at FVTPL	Available-for-sale financial assets	Loans and receivables	Total				
Current assets:								
Cash and cash equivalents	₩ -	₩ -	₩ 84,482	₩ 84,482				
Short-term financial instruments	-	-	43,516	43,516				
Trade accounts receivable (*1)	-	-	399,748	399,748				
Other accounts receivable	-	-	1,767	1,767				
Accrued income	-	-	112	112				
Guarantee deposits	-	-	1	1				
Derivative financial assets	599			599				
	599		529,626	530,225				
Non-current assets:								
Long-term financial instruments	-	-	19	19				
Available-for-sale financial assets	-	78,984	-	78,984				
Long-term loans	-	-	397	397				
Guarantee deposits	-	-	10,829	10,829				
Derivative financial assets	3,015			3,015				
	3,015	78,984	11,245	93,244				
	₩ 3,614	₩ 78,984	₩ 540,871	₩ 623,469				

(*1) Unbilled receivables amounting to ₩63,331 million as at December 31, 2017 are not included in the financial instruments.

4. Financial instruments (cont'd)

4.2 Financial liabilities

Details of financial liabilities as at December 31, 2018 and 2017 are as follows (Korean won in millions):

		December 31, 2018	
	Financial liabilities at FVTPL	Other financial liabilities	Total
Current liabilities:			
Short-term borrowings	₩ -	₩ 910,000	₩ 910,000
Trade accounts payable	-	116,507	116,507
Other accounts payable	-	98,969	98,969
Accrued expenses	-	67,400	67,400
Current portion of long-term debt	-	1,083,112	1,083,112
Derivative financial liabilities	146		146
	146	2,275,988	2,276,134
Non-current liabilities:			
Bonds payable	-	5,134,589	5,134,589
Leasehold deposits received	-	6,210	6,210
Derivative financial liabilities	240,169		240,169
	240,169	5,140,799	5,380,968
	₩ 240,315	₩ 7,416,787	₩ 7,657,102

		December 31, 2017	
	Financial liabilities at FVTPL	Other financial liabilities	Total
Current liabilities:		Other Infancial habilities	Total
Short-term borrowings	\mathbb{W}	- ₩ 780,000	₩ 780,000
Trade accounts payable		- 125,590	125,590
Other accounts payable		- 98,155	98,155
Accrued expenses		- 58,695	58,695
Current portion of long-term debt		- 1,052,733	1,052,733
Derivative financial liabilities	5^	<u> </u>	51
	5 [^]	2,115,173	2,115,224
Non-current liabilities:			
Bonds payable		- 5,034,055	5,034,055
Leasehold deposits received		- 11,775	11,775
Derivative financial liabilities	2,685		2,685
	2,685	5,045,830	5,048,515
	₩ 2,736	<u>8 ₩ 7,161,003</u>	₩ 7,163,739

4. Financial instruments (cont'd)

4.3 Gain and loss by category of financial instruments

Details of gain and loss by category of financial instruments for the years ended in December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the year ended December 31, 2018											
		Interest income		Interest expense		Gain (loss) on foreign currency	(Gain (loss) on derivatives instruments	(ir and	Reversal mpairment) gain (loss) disposals		Total
Financial assets at FVTPL	₩	5,274	₩	-	₩	-	₩	174,307	₩	35,366	₩	214,947
Financial assets at FVOCI		-		-		-		-		281		281
Financial assets measured at amortized cost		1,544		-		4,139		-		-		5,683
Financial liabilities at FVTPL		-		-		-		(249,683)		-		(249,683)
Other financial liabilities		-		(176,033)		(1,029)		-		-		(177,062)
	₩	6,818	₩	(176,033)	₩	3,110	₩	(75,376)	₩	35,647	₩	(205,834)

	For the year ended December 31, 2017									
		ividends Interest		Interest expense	Gain (loss) on foreign currency	Gain (loss) on derivatives instruments	Reversal (impairment) and gain (loss) on disposals	Total		
Financial assets at FVTPL	₩	-	₩ -	₩ -	₩ -	₩ (2,595)	₩ -	₩ (2,595)		
Loans and receivables		-	4,559	-	(810)	-	(123)	3,626		
Available-for-sale financial assets		3	-	-	-	-	(90,708)	(90,705)		
Financial liabilities at FVTPL		-	-	-	-	1,606	-	1,606		
Other financial liabilities		-		(152,787)	(287)			(153,074)		
	₩	3	₩ 4,559	₩ (152.787)	₩ (1.097)	₩ (989)	₩ (90.831)	₩ (241.142)		

4.4 Fair values of financial instruments by hierarchy level

The Company categorized financial instruments measured at fair value based on the inputs to measure the fair value. The level of hierarchy of fair value is as follows:

- Level 1: inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2: inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3: inputs are unobservable inputs for the asset or liability.

Details of fair value of financial instruments by hierarchy level as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018								
		Level 1		Level 2		Level 3		Total	
Financial assets:									
Financial assets measured at FVTPL	₩	169,762	₩	-	₩	162,475	₩	332,237	
Financial assets measured at FVOCI		-		-		232,216		232,216	
Derivative financial assets		-		34		175,993		176,027	
	₩	169,762	₩	34	₩	570,684	₩	740,480	
Financial liabilities:					-	<u> </u>		<u> </u>	
Derivative financial liabilities	₩	-	₩	146	₩	240,169	₩	240,315	
				Decem	ber 3	31, 2017			
		Level 1		Level 2		Level 3		Total	
Financial assets:									
Financial assets at FVTPL	₩	-	₩	599	₩	3,015	₩	3,614	
Available-for-sale financial assets (*1)						15,072		15,072	
	₩	_	₩	599	₩	18,087	₩	18,686	
Financial liabilities:									
Financial liabilities at FVTPL	₩	-	₩	51	₩	2,685	₩	2,736	

4. Financial instruments (cont'd)

(*1) This does not include available-for-sale financial assets, which are measured at cost because their fair values could not be reliably estimated.

Changes in Level 3 financial assets for the nine months ended December 31, 2018 are as follows (Korean won in millions):

	For the year ended December 31, 2018								
	Beginning balance	Change of accounting policies	Acquisition	Disposal	Valuation	Replacement(*1)	Ending		
Financial assets		₩ 62,617	₩ 83,027	₩ (3,809)			111 100 175		
measured at FVTPL									
Financial assets measured at FVOCI	-	2,374	24,887	(1)	281	204,675	232,216		
Derivative financial assets	-	477	-	-	175,516	-	175,993		
Financial assets at FVTPL	3,015	(3,015)	-	-	-	-	-		
Available-for-sale financial assets	15,072	(15,072)							
	₩ 18,087	₩ 47,381	₩ 107,914	₩ (3,810)	₩ 196,437	₩ 204,675	₩ 570,684		

(*1) During the current period, as a result of a non-uniform capital increase of SK Shipping Co., which was a subsidiary, The Company's share was lowered to 17.27% (on common stock basis) by not participating in the capital increase. As a result, The Company lost control and replaced these investment shares with long-term investment securities. The fair value assessment was carried out on the replacement with long-term investment securities and the replacement amount includes the valuation amount.

4.5 Valuation techniques and inputs

The description of the valuation techniques and inputs used to measure the fair value of financial instruments using fair value measurements as at the end of the current term and the end of the prior term, in which the Company is classified as Level 2 or Level 3 is as follows:

A. Currency forward

The fair value of the currency forward was measured in principle based on the forward exchange rate disclosed in the market as at the end of the current term for the period consistent with the remaining period of the currency swap. If the forward exchange rate for a period consistent with the remaining period of the currency forward is not disclosed in the market, the forward exchange was measured by estimating the forward exchange rate for a period similar to the remaining period of the currency swap by applying interpolation to each period. The discount rate used to measure the fair value of the currency forward was determined using the yield curve derived from the rate quoted in the market as at the end of the current term.

4. Financial instruments (cont'd)

B. Debt securities

The fair value of debt securities is measured by discounting the future cash flows of debt securities by applying the market interest rate applied to companies with similar creditworthiness as the issuer of debt securities.

C. Unlisted stocks

The fair value of unlisted stocks is measured by using a cash flow discount model and some assumptions are used that are not based on observable market prices or ratios, such as assumptions or estimates of sales growth, pre-tax operating profit rates, weighted average capital costs, etc. to estimate future cash flows. The weighted average capital expense used to discount future cash flows was determined by applying CAPM. The Company determined that the effect of the major assumptions and estimates that is mentioned above on the fair value of unlisted stocks was significant, so the fair value measurement of unlisted stock was categorised within Level 3 of the fair value hierarchy.

D. Inter-shareholder contract

The fair value of the Inter-shareholder contract is based on Monte-Carlo Simulation. It generates the discrete path of the future interest rate, estimates the point of time when the buyout option is exercised, calculates the present value, and repeatedly executes it to calculate the fair value as the average value of the calculated value. On the other hand, unlisted shares subject to the purchase option were measured in accordance with the fair value assessment method of unlisted shares, and the fair value measurement of inter-share contracts was classified as Level 3 in the fair value hierarchy as the main assumptions and estimates used to assess the fair value of unlisted shares were considered to have a significant effect on their fair value.

The valuation techniques and input variables used for major financial instruments classified as Level 3 are as follows (Korean won in millions):

	December 31, 2018										
	Va	aluation amount		Valuation techniques	Level 3 inputs	Input variations					
SK Shipping Co., Ltd.	Assets	₩	204,675	DCF model	Permanent growth rate WACC	0.0%~1.0% 8.5%					
Contract between share holders	Assets Liabilities	₩	175,993 240,169	Monte-Carlo Simulation	Term structure of interest rate WACC	2.0%~2.4% 5.3%~18.1%					

Among the inputs used to measure the fair value of a financial instrument, If the permanent growth rate increase (decrease), the fair value increases (decreases) and if the weighted average cost of capital increases (decrease), the fair value decreases (increases). There is no change in valuation techniques used to measure fair value of financial instruments classified as Level 2 and Level 3

5. Trade accounts receivable

Details of trade accounts receivable as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	Decem	<u>ber 31, 2018</u>	December 31, 2017		
Trade accounts receivable:					
Trade accounts receivable	${\mathbb W}$	354,652	\mathbb{W}	400,252	
Contract assets					
(unbilled receivables) (*1)		138,098		63,331	
		492,750		463,583	
Allowance for doubtful accounts:					
Trade accounts receivable		(524)		(504)	
	\overline{W}	492,226	₩	463,079	

(*1) Unbilled receivables at the end of the previous reporting period are those applicable to KIFRS 1011.

6. Inventories

Details of inventories as at December 31, 2018 and 2017 are as follows (Korean won in millions):

		De	December 31, 2018				December 31, 2017					
		Valuation				Valuation						
		Cost	allowance	Bool	<u>k value</u>		Cost	allowance	Book	value		
Merchandises	₩	-	₩ -	₩	-	₩	604	₩ -	₩	604		
Raw materials		172	-		172		172	-		172		
Materials in transit		-					9			9		
	₩	172	₩ -	₩	172	₩	785	₩ -	₩	785		

7. Available-for-sale financial assets

(1) Details of available-for-sale financial assets as at December 31, 2018 and 2017 are as follows (Korean won in millions):

		December	31, 2018	December 31, 2017			
		Cost	Book value		Cost	Book value	
Financial assets							
measured at FVTPL							
Equity instruments	₩	91,439	₩ -	₩	-	₩ -	
Debt securities (*1)		96,360	109,831		-	-	
Money invested and others		57,883	52,644		-	-	
Financial assets at FVOCI							
measured at FVOCI							
Equity instruments (*2)		234,892	232,216		-	-	
Financial assets measured at							
amortized cost							
Debt securities		394	394		-	-	
Available-for-sale financial asse	is						
Equity instruments (*3)		-	-		96,769	5,330	
Debt securities (*4)		-	-		13,078	13,486	
Money invested					50 540	00.400	
and others (*3)		-	-		<u>59,516</u>	60,168	
	₩	480,968	<u>₩ 395,085</u>	₩	169,363	₩ 78,984	

7. Available-for-sale financial assets (cont'd)

- (*1) Represents convertible redeemable preference shares of GRAB Holdings Inc. and convertible bonds of Socar, Inc.
- (*2) The Company applied the irrevocable option to designate the equity instruments held for strategic investment, not for held-for-trading purpose, at the date of initial application of K-IFRS 1109, as items measured at FVOCI.
- (*3) For some equity securities and equity investments that are not marketable at the end of the previous period, the Company judged that there is high possibility of distorting fair value due to lack of market price disclosed in the active market and low reliability of basic data for fair value evaluation. Thus The Company assessed the financial assets as acquisition cost reflecting impairment losses.
- (*4) Represents convertible bonds of Mobile TCS Co., Ltd. and Socar, Inc.

(2) Details of Long-term investment securities as at December 31, 2018 and available-for-sale financial assets as at December 31, 2017 are as follows (Korean won in millions):

		Decemb	, 2018	December 31, 2017				
	Acq	uisition cost	E	Book value	Acc	quisition cost	Book value	
Non-marketable equity instruments	₩	326,331	₩	232,216	₩	96,769	₩	5,330
Debt securities		96,754		110,225		13,078		13,486
Money invested and others		57,883		52,644		59,516		<u>60,168</u>
	₩	480,968	₩	395,085	₩	169,363	₩	78,984

(3) Details of non-marketable equity instruments as at December 31, 2018 and 2017 are as follows (Korean won in millions):

		Decem	per 31, 201	8	December 31, 2017			
	Equity	Ac	quisition	Book	Acquisition	Book		
	ownership	p cost value		cost	value			
SK Shipping Co., Ltd.	17.27%	₩	204,675	₩204,675	₩ -	₩ -		
Mozido (C-3 Preferred share)	1.98%		90,790	-	90,790	-		
Otonomo Technologies Ltd.	2.69%		11,624	11,624	-	-		
Sino Glow Limited (*1)	25.00%		5,309	5,589	-	-		
Pulus, Inc	17.92%		4,387	1,851	4,387	4,387		
Lvis Corporation	5.88%		3,381	3,381	-	-		
Evidnet Co., Ltd.	18.75%		3,000	3,000	-	-		
GenEdit Inc.	8.29%		1,537	1,537	-	-		
nDosa Technologies (*1)	20.00%		649	-	649	-		
Intellectual Discovery	0.88%		500	80	500	500		
Ultra Robot Land Co., Ltd.	8.39%		417	417	417	417		
Nongshim Development Co., Ltd.	0.13%		37	37	-	-		
Ultra Robot Land Assets Management Co., Ltd.	8.39%		25	25	25	25		
Ilshin Leisure Co., Ltd	-		-		1	1		
		₩	326,331	₩ 232,216	₩ 96,769	₩ 5,330		

(*1) As the Company do not have significant influence, the Company classifies it as long-term investment securities despite having more than 20% equity ownership.

7. Available-for-sale financial assets (cont'd)

(4) Details of equity investments as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	Decembe	r 31, 2018	December 31, 2017				
	Acquisition cost	Book value	Acquisition cost	Book value			
Prostar Asia-Pacific Energy Infrastructure SK Fund L.P	₩ 25,655	₩ 23,366	₩ 24,976	₩ 24,976			
Hermed Capital Health Care Fund L.P.	17,893	22,757	20,911	20,911			
Dogus-SK Private Equity Investment Company	7,472	1,613	7,472	7,472			
CFC-SK EI Dorado LATAM Fund L.P.	5,102	2,466	4,514	4,514			
Korea Software Financial Cooperative	1,500	2,215	1,500	2,152			
Golden Gate Ventures K9, L.P. Information & Communication	118	84	-	-			
Financial Cooperative	107	107	107	107			
Fire Guarantee	20	20	20	20			
Engineering Guarwantee Insurance	16	16	16	16			
	₩ 57,883	₩ 52,644	₩ 59,516	₩ 60,168			

(5) Changes in long-term investment securities (formerly, available-for-sale financial assets) for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the years ended					
	December 31, 2018(*1)	December 31, 2017(*2)				
Beginning balance	₩ 78,984 ₩	₹ 155,695				
Effect of changes in the accounting policies	(13,993)	-				
Acquisitions	107,914	46,724				
Gain on valuation	20,921	19,549				
Disposals	(3,810)	(335)				
Impairment loss	-	(90,790)				
Replacement	205,069	<u>(51,859</u>)				
Ending balance	<u>₩ 395,085</u> <u>₩</u>	<i>₹</i> 78,984				

- (*1) During the current period, SK Shipping Co., Ltd. lost control of SK Shipping Co. and was replaced by long-term Investment & Securities Co. as the company's share ratio was reduced to 17.27% (usually based on ordinary shares).
- (*2) During the prior period, the Company decided to sell entire shares in SK Securities Co., Ltd., which was held as available-for-sale securities, pursuant to the restriction on the holding companies in the Fair Trade Act and classified the assets as held for sale. The equity securities were sold to J&W BIG LLC on July 30, 2018.

8. Investments in subsidiaries

(1) Details of investments in subsidiaries as at December 31, 2018 and 2017 are as follows (Korean won in millions):

			December 31, 2018			December 31, 2017	
	Domicile	Principal Business activity	Equity ownership (*1)	Acquisition cost	Book value	Book value	
SK Innovation Co., Ltd. (*2)	Korea	Resource development	33.40%	₩ 3,072,937			
SK Telecom Co., Ltd. (*2,6)	Korea	Mobile	26.78%	5,416,019	5,416,019	5,080,681	
		Tele-communication			, ,		
SK Networks Co., Ltd. (*2)	Korea	Trading and distribution	39.14%	706,229	706,229	706,229	
SKC Co., Ltd. (*2)	Korea	Petrochemicals	41.00%	548,654	548,654	548,654	
SK Maritime Co., Ltd. (*3)	Korea	Shipping	-	-	-	332,400	
SK Shipping Co., Ltd. (*3)	Korea	Shipping	-	-	-	-	
SK E&S Co., Ltd.	Korea	City gas business	90.00%	2,600,000	2,600,000	2,600,000	
SK Engineering & Construction Co., Ltd. (*2)		Construction	44.46%	545,300	545,300	545,300	
SK Siltron Co., Ltd. (*4)	Korea	Manufacturing and sales of silicon thin sheet	51.00%	622,606	622,606	626,023	
SK Biopharmaceuticals Co., Ltd. (*5)	Korea	Life science	100.00%	478,702	478,702	328,702	
SK Materials Co., Ltd. (*2)	Korea	Special-gas manufacturing and sales	49.10%	473,335	473,335	473,335	
SK Biotek Co., Ltd.	Korea	Life science	100.00%	336,318	336,318	336,318	
SK Forest Co., Ltd.	Korea	Landscape construction	100.00%	61,387	61,387	61,387	
SK Infosec Co., Ltd.	Korea	Information Security services	-	-	-	44,077	
FSK L&S Co., Ltd. (*6)	Korea	Conversion Logistics business	-	-	-	24,158	
SK China Company, Ltd. (*7)	Hong Kong		27.42%	557,117	557,117	557,117	
Alchemy Acquisition Corp.	USA	Investment	100.00%	526,631	526,631	-	
Plutus Capital NY, Inc. (*8)	USA	Investment	100.00%	388,527	388,527	120,186	
SK South East Asia Investment Pte. Ltd.				,	,	,	
(*7)	Singapore	Investment	20.00%	110,880	110,880	-	
Plutus Fashion NY, Inc. (*9)	USA	Fashion	100.00%	74,113	74,113	36,813	
SK S.E.Asia Pte. Ltd.	Singapore	Investment	100.00%	25,847	25,847	25,847	
SK C&C Beijing Co., Ltd.	China	Computer system	100.00%	25,481	25,481	25,481	
SK GI Management	Cayman Islands	Investment	100.00%	9,523	9,523	9,523	
SK Investment Management Co., Ltd.	Hong Kong		80.76%	9,201	9,201	9,201	
Gemini Partners Pte. Ltd. (*7)	Singapore	Consulting investment	20.00%	6,018	2,601	6,018	
SK MENA Investment B.V. (*7)	Netherlands		11.54%	5,178	5,178	5,178	
SK Latin Americas Investment S.A. (*7)	Spain	Investment	11.54%	5,135	5,135	5,135	
SK C&C India Pvt. Ltd.	India	Computer system	100.00%	3,442	382	382	
SK Technology Innovation Company (*7)	Cayman Islands	Research and development	2.12%	1,876	1,876	1,876	
Golden Pearl EV Solutions Limited	Hong Kong	Investment	100.00%	657	657	-	
SK Computer and Communication LLC (*10)		Computer system	49.00%	380	380	380	
S&G Technology	Saudi Arabia	a Computer system	51.00%	74	74	74	
Saturn Agriculture Investment Co., Ltd.	Hong Kong	Investment	100.00%	5	5	5	
				<u>₩ 16,611,572</u>	₩ 16,605,095	₩ 15,583,417	

(*1) Equity ownership is based on ordinary shares.

- (*2) SK Innovation Co., Ltd. and 5 others were classified as investments in subsidiaries as the Company is able to exercise de facto control. The remaining voting rights of SK Innovation Co., Ltd. and 5 other companies are widely dispersed, and the Company's voting rights are sufficient to give it power.
- (*3) The Company merged SK Maritime Co., Ltd. and has possession of SK Shipping Co., Ltd., a subsidiary of extinct corporation (see Note 31 'Business combination'). As a result of a non-uniform capital increase of SK Shipping Co., The Company's share was lowered to 17.27% (on common stock basis) and The Company lost control of SK Shipping Co.. Consequently, The Company replaced these investment shares with long-term investment securities.
- (*4) During the current period, the book value decreased due to the refund of acquisition costs.
- (*5) The Company participated in new share issue of SK Biopharmaceuticals Co., Ltd. and acquired ₩150,000 million additionally.
- (*6) During the current year, the Company entered into a comprehensive stock exchange contract in which treasury shares of SK Telecom Co., Ltd. (1,260,668 shares of SK Telecom) were transferred instead of transferring all of its shares of SK Infosec Co., Ltd. to SK Telecom Co., Ltd., a subsidiary. As a result, the share in SK Telecom increased from 25.22% to 26.78%. In addition, the Company sold its entire share of FSK L&S Co., Ltd. to SK Telecom Co., Ltd..

8. Investments in subsidiaries (cont'd)

- (*7) Classified as investments in subsidiaries as control can be exercised using indirect equity ownership through the Company's subsidiaries.
- (*8) During the current period, the Company invested additional ₩268,341 million in Plutus Capital NY, Inc., the subsidiary.
- (*9) During the current period, the Company invested additional ₩37,300 million in Plutus Fashion NY, Inc., the subsidiary.
- (*10)As the Company acquired voting rights of shares (51%), it classified SK Computer and Communication LLC as the Company's subsidiaries.

(2) Changes in subsidiaries for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the year ended December 31, 2018								
	Be	eginning	•				Ei	nding	
	b	alance	Acquisitions	Disposal	Others		ba	lance	
SK Innovation Co., Ltd.	₩	3,072,937	₩ -	₩ -	₩	-	₩	3,072,937	
SK Telecom Co., Ltd.		5,080,681	335,338	-		-		5,416,019	
SK Networks Co., Ltd.		706,229	-	-		-		706,229	
SKC Co., Ltd.		548,654	-	-		-		548,654	
SK Maritime Co., Ltd.		332,400	-	-		(332,400)		-	
SK Shipping Co., Ltd.		-	21,659	-		(21,659)		-	
SK E&S Co., Ltd		2,600,000	-	-		-		2,600,000	
SK Engineering & Construction Co., Ltd.		545,300	-	-		-		545,300	
SK Siltron Co., Ltd.		626,023	-	-		(3,417)		622,606	
SK Biopharmaceuticals Co., Ltd.		328,702	150,000	-		-		478,702	
SK Materials Co., Ltd.		473,335	-	-		-		473,335	
SK Biotek Co., Ltd.		336,318	-	-		-		336,318	
SK Forest Co., Ltd.		61,387	-	-		-		61,387	
SK Infosec Co., Ltd.		44,077	-	-		(44,077)		-	
FSK L&S Co., Ltd.		24,158	-	(24,158)		-		-	
SK China Company, Ltd.		557,117	-	-		-		557,117	
Alchemy Acquisition Corp.		-	526,631	-		-		526,631	
Plutus Capital NY, Inc.		120,186	268,341	-		-		388,527	
SK South East Asia Investment Pte. Ltd.		-	110,880	-		-		110,880	
Plutus Fashion NY, Inc.		36,813	37,300	-		-		74,113	
SK S.E.Asia Pte. Ltd.		25,847	-	-		-		25,847	
SK C&C Beijing Co., Ltd.		25,481	-	-		-		25,481	
SK GI Management		9,523	-	-		-		9,523	
SK Investment Management Co., Ltd.		9,201	-	-		-		9,201	
Gemini Partners Pte. Ltd.		6,018	-	-		(3,417)		2,601	
SK MENA Investment B.V.		5,178	-	-		-		5,178	
SK Latin Americas Investment S.A.		5,135	-	-		-		5,135	
SK C&C India Pvt. Ltd.		382	-	-		-		382	
SK Technology Innovation Company		1,876	-	-		-		1,876	
Golden Pearl EV Solutions Limited		-	657	-		-		657	
SK computer and communication LLC		380	-	-		-		380	
S&G Technology		74	-	-		-		74	
Saturn Agriculture Investment Co., Ltd.		5				-		5	
	₩	15,583,417	₩ 1,450,806	₩ (24,158)	₩	<u>(404,970</u>)	₩	16,605,095	

8. Investments in subsidiaries (cont'd)

	For the year ended December 31, 2017								
	Be	ginning				E	nding		
	b	alance	Acquisitions	Disposal	Others	ba	lance		
SK Innovation Co., Ltd.	₩	3,072,937	₩ -	₩ -	₩ -	₩	3,072,937		
SK Telecom Co., Ltd.		5,080,681	-	-	-		5,080,681		
SK Networks Co., Ltd.		706,229	-	-	-		706,229		
SKC Co., Ltd.		548,654	-	-	-		548,654		
SK Maritime Co., Ltd.		332,400	-	-	-		332,400		
SK E&S Co., Ltd.		2,600,000	-	-	-		2,600,000		
SK Engineering & Construction Co., Ltd.		545,300	-	-	-		545,300		
SK Siltron Co., Ltd.		-	626,023	-	-		626,023		
SK Biopharmaceuticals Co., Ltd.		328,702	-	-	-		328,702		
SK Materials Co., Ltd.		473,335	-	-	-		473,335		
SK Biotek Co., Ltd.		163,818	172,500	-	-		336,318		
SK Forest Co., Ltd		61,387	-	-	-		61,387		
SK Infosec Co., Ltd.		44,077	-	-	-		44,077		
FSK L&S Co., Ltd.		7,200	16,958	-	-		24,158		
Happynarae Co., Ltd.		1,436	-	(1,436)	-		-		
SK Encarsales.com., Ltd.		13,914	-	-	(13,914)	1	-		
SM Core, Inc. (*1)		-	39,419	-	(39,419)		-		
SK China Company, Ltd.		299,352	113,666	-	144,099		557,177		
Plutus Capital NY, Inc.		-	120,186	-	-		120,186		
Plutus Fashion NY, Inc.		-	36,813	-	-		36,813		
SK S.E.Asia Pte. Ltd.		25,847	-	-	-		25,847		
SK C&C Beijing Co., Ltd.		25,481	-	-	-		25,481		
SK GI Management		9,523	-	-	-		9,523		
SK Investment Management Co., Limited		-	-	-	9,201		9,201		
Gemini Partners Pte. Ltd.		6,018	-	-	-		6,018		
SK MENA Investment B.V.		5,178	-	-	-		5,178		
SK Latin Americas Investment S.A.		5,135	-	-	-		5,135		
SK C&C India Pvt. Ltd.		382	-	-	-		382		
SK Technology Innovation Company		1,876	-	-	-		1,876		
SK computer and communication LLC		-	380	-	-		380		
S&G Technology		74	-	-	-		74		
Saturn Agriculture Investment Co., Ltd.		-	5	-	-		5		
SKY Property Management Ltd.		44,885	-	-	(44,885)		-		
SK Industrial Development China Co., Ltd.		69,624	-	-	(69,624)	1	-		
SK MENA B.V.		11,364		(11,364)			_		
	W	14,484,809	₩ 1,125,950	₩ (12,800)	₩ (14,542)	₩	15,583,417		

(*1) During the prior reporting period, the Company acquired 26.65% equity ownership of SM Core, Inc. and voting rights of shares (16.93%) owned by the CEO have been delegated to the Company. Consequently, the Company classified SM Core, Inc. as its subsidiary. However, as the delegation expired, the Company was unable to exercise de facto control so the Company classified SM Core, Inc. as its investments in associates and joint ventures.

(3) Fair value of marketable investments in subsidiaries as at December 31, 2018 is as follows (Korean won in millions):

	Decen	nber 31, 2018
SK Innovation Co., Ltd.	\mathbb{W}	5,543,640
SK Telecom Co., Ltd.		5,827,700
SK Networks Co., Ltd.		505,143
SKC Co., Ltd.		550,962
SK Materials Co., Ltd.		781,959

(4) Gain and loss on investments in subsidiaries for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

		For the ye	ears of	ended			
	Decem	December 31, 2018 December 31, 2017					
Dividends incomes from investment in subsidiaries (*1)	₩	827,288	₩	688,564			

(*1) Includes dividends income from SK Encarsales.com., Ltd., which is classified as non-current assets held for sale.

8. Investments in subsidiaries (cont'd)

(5) Impairment test of investments in subsidiaries

The Company performs impairment tests of investment in subsidiaries on an annual basis. If any indication of impairment exists, the recoverable amount of the investment is estimated. There is no indication of impairment of investments in subsidiaries, as a result of impairment test.

9. Investments in associates and joint ventures

Details of investments in associates and joint ventures as at December 31, 2018 and 2017 are as follows (Korean won in millions):

, , , , , , , , , , , , , , , , , , ,				Dec	ember 31.	2018	2	Dec	ember 31, 2017
	Domicile	Principal business activity	Equity ownership		cquisition cost	2010	Book value		Book value
Investments in associates:	Domicile	delivity	ownersnip		COSI		value		value
Socar. Inc.(*1)	Korea	Rental of cars	23.87%	₩	91,800	¥#/	91,800	₩.	91,800
SMCore Inc.	Korea	Munufacturing and	23.07 /0	vv	91,000	vv	91,000	**	91,000
Smedie me.	Notea	sales of automated							
		logistics system	26.65%		39,419		39,419		39,419
Begas Co., Ltd. (*1, 2, 3)	Korea	Management consulting	17.86%		5,000		5,000		-
THiRA-UTECH Co., Ltd. (*1, 2, 3)	Korea	Service manufacturing	18.07%		4,200		4,200		-
ACRYL Inc. (*1, 2, 3)	Korea	Information service	18.40%		2,500		2,500		-
Daehan Kanggun BcN Co., Ltd. (*4)	Korea	Wired communication	0.67%		58		58		58
Mobile TCS Co., Ltd. (*5)	Korea	Mobile service	-		-		-		820
ESR Cayman Limited (*2,6)	Cayman	Investment	12.52%		493,627		493,627		378,427
Turo Inc. (*2, 7)	USA	Rental of cars	4.47%		39,728		39,728		39,762
9352-7281 Quebec Inc.	Canada	Investment	40.09%		31,558		31,558		31,558
Solid Energy Systems Corp. (*2,3)) USA	New material	13.10%		28,791		28,791		-
		related to battery	00.000/		44.007		44.007		44.007
FSK Holdings Co., Ltd.	Hong Kong		30.00%		11,937		11,937		11,937
Mozido Corfire, Inc. (*2)	USA	System consulting	19.94%		6,767				
					755,385		748,618		<u>593,781</u>
Investments in joint ventures:									
Hana Land Chip PEF 33 (*4) Socar Mobility Malaysia, SDN	Korea	Real estate	13.51%	₩	40,000	₩	40,000	₩	40,000
BHD.	Malaysia	Rental of cars	60.00%		14,189		14,189		14,189
-					54,189		54,189		54,189
				₩	809,574	₩	802,807	₩	647,970

(*1) It is the equity share that takes preferred stock with voting rights into consideration.

- (*2) As the Company is able to exercise significant influence over the entity although its ownership interests is less than 20%, the investment in the entity was classified as investments in associates.
 (*2) During the surrent period, the Company peutly acquired the investee.
- (*3) During the current period, the Company newly acquired the investee.
- (*4) The investment in the entity was classified as investments in associates and joint ventures based on the indirect ownership interest of the Company's subsidiary.

(*5) During the current period, the Company disposed the entire equity shares in the investee.

(*6) During the current period, the Company invested additional 115,200 million in ESR Cayman Limited.

(*7) During the current period, the book value decreased due to the refund of acquisition costs.

10. Property, plant and equipment

(1) Details of property, plant and equipment as at December 31, 2018 and 2017 are as follows (Korean won in millions):

			December 31, 20	18	December 31, 2017						
	Acquisition cost		Accumulated depreciation B		ok value		Acquisition cost	Accumulated depreciation	В	ook value	
Land	₩	84,251	₩ -	₩	84,251	₩	169,505	₩ -	₩	169,505	
Buildings		323,400	(47,757)		275,643		475,190	(106,449)		368,741	
Structures		8,780	(749)		8,031		7,796	(439)		7,357	
Vehicles		7,504	(2,479)		5,025		7,504	(2,120)		5,384	
Furniture and fixtures		325,244	(221,061)		104,183		322,264	(214,380)		107,884	
Construction-in-progress		17,670			17,670		12,787		-	12,787	
	₩	766,849	₩ (272,046)	₩	494,803	₩	995,046	₩ (323,388)	₩	671,658	

(2) Details of changes in property, plant and equipment for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

				For the year ende	ed De	cember 31, 20	18		
	E	Beginning							Ending
		balance	Acquisition	Depreciation		Disposal	Transfer		balance
Land	₩	169,505	₩ -	₩ -	₩	(85,293)₩	39	₩	84,251
Buildings		368,741	-	(15,045))	(102,072)	24,019		275,643
Structures		7,357	-	(310))	-	984		8,031
Vehicles		5,384	-	(359))	-	-		5,025
Furniture and fixtures		107,884	29,873	(33,550))	(636)	612		104,183
Construction-in-progress		12,787	30,537				(25,654)		17,670
	₩	671,658	₩ 60,410	₩ (49,264)	₩	<u>(188,001)</u> ₩	-	₩	494,803

			For the yea	r ended Dec	ember 31,	2017	
	Beginning					Held	Ending
	balance	Acquisition	Depreciation	Disposal	Transfer	for sale (*1)	balance
Land	₩ 173,818	₩ -	₩ -	₩ -	₩ 2,195	₩ (6,508)	₩ 169,505
Buildings	390,249	-	(15,383)	-	1,074	(7,199)	368,741
Structures	6,885	-	(284)	-	756	-	7,357
Machinery and equipment	42	73	(22)	-	-	(93)	-
Vehicles	5,919	1,513	(683)	(47)	-	(1,318)	5,384
Furniture and fixtures	105,577	40,488	(32,149)	(1,120)	131	(5,043)	107,884
Construction-in-progress	1,891	15,052			(4,156)		12,787
	₩ 684,381	₩ 57,126	₩ (48,521)	₩ (1,167)	₩ -	<u>₩ (20,161</u>)	₩ 671,658

(*1) The amounts were transferred to non-current assets held for sale during the previous reporting period

11. Investment property

(1) Details of investment properties as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	_		Decembe	er 31, 20)18				December 31	, 201	7
	Acquis		Accumu depreci		Book value		Acquisition cost		Accumulated depreciation		Book value
Land	₩	-	₩	-	₩	-	₩	31,395	₩	- ₩	31,395
Buildings		9,810		(1,457)		8,353		9,810	(1,03	<u>31) _</u>	8,779
	₩	9,810	₩	(1,457)	₩	8,353	₩	41,205	₩ (1,03	31) ₩	40,174

(2) Changes in investment properties for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

				For the year ended	De	cember 31, 2018		
		Beginning balance		Acquisition /Disposal		Depreciation		Ending balance
Land	₩	31,395	₩	(31,395)	₩	-	₩	-
Buildings		8,779		-		(426)		8,353
	₩	40,174	₩	(31,395)	₩	(426)	₩	8,353
				For the year ended	De	cember 31, 2017		
		Beginning		Acquisition				Ending
		balance		/Disposal		Depreciation		balance
Land	₩	31,395	₩	-	₩	-	₩	31,395
Buildings		9,206		-		(427)		8,779
	₩	40,601	₩		₩	(427)	₩	40,174

(3) Details of gains and losses related to investment property for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

		For the yea	rs ended			
	December 31, 2018 Dec					
Rental income	\overline{W}	2,156 ∀	∀ 2,275			
Depreciation		(426)	(427)			
	\overline{W}	1,730 ₩	∀ 1,848			

Operating expenses related with rental income were not recognized separately.

(4) The fair value of building classified as investment property was ₩9,810 million as at December 31, 2018.

12. Goodwill and Intangible assets

(1) Details of intangible assets as at December 31, 2018 and 2017 are as follows (Korean won in millions):

			December	31, 2	2018			December 31, 2017						
	Acquisiti	on	Accumulated	Acc	umulated			Acquisition	Ac	cumulated	Ac	cumulated		
	cost		amortization	imp	pairment	Book value		cost	ar	nortization	in	npairment	Bo	ok value
Development costs	₩ 122,2	214 3	₩ (59,135)	₩	(5,086)	₩ 57,993	₩	101,530	₩	(50,445)	₩	(2,688)	₩	48,397
Memberships	54,1	91	-		(13,648)	40,543		52,438		-		(13,648)		38,790
Bran-related assets	1,975,0	000	-		-	1,975,000		1,975,000		-		-		1,975,000
Others	37,0	086	(4,924)		-	32,162		29,731		(1,619)		-		28,112
	₩ 2.188.4	91 ³	₩ (64.059)	₩	(18.734)	₩2.105.698	₩	2.158.699	₩	(52.064)	₩	(16.336)	₩ :	2.090.299

(2) Changes in intangible assets for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

			I	For the year ended	December 31,	2018	
	Beg	inning					Ending
	ba	lance	Acquisition	Depreciation	Disposal	Impairment	balance
Development costs	₩	48,397 ₩	∀ 27,287	₩ (12,354) ₩	(2,939)	₩ (2,398) ₩	57,993
Memberships		38,790	4,215	-	(2,462)	-	40,543
Brand-related assets		1,975,000	-	-	-	-	1,975,000
Others		28,112	7,602	(3,360)	(192)	<u> </u>	32,162
	₩	<u>2,090,299 ∛</u>	₩ 39,104	<u>₩ (15,714)</u> ₩	(5,593)	₩ (2,398) ₩	2,105,698

			For the year ended	December 31, 2	2017	
	Beginning balance	Acquisition	Depreciation	Disposal	Held for sale (*1)	Ending balance
Goodwill	₩ 4,63	9₩ -	₩ - ₩	- 4	₩ (4,639) ₩	4,639
Development costs	44,79	3 19,562	(11,665)	(329)	(3,969)	48,397
Memberships	35,42	9 6,094	-	(2,473)	(260)	38,790
Brand-related assets	1,975,00) -	-	-	-	1,975,000
Others	28,85	91,766	(1,672)	(48)	(793)	28,112
	₩ 2,088,72	<u>5</u> <u>₩ 27,422</u>	<u>₩ (13,337)</u> ₩	<i>(</i> 2,850)	₩ (9,661) ₩	2,090,299

(*1) The amounts were transferred to assets held for sale during the previous reporting period.

(3) Impairment testing of brand contract-related assets

The Company measured the recoverable amount of intangible assets with an indefinite useful life related to brand. Major assumptions used in the calculation reflected the management's assessment of the future trends in each reporting segment using the brand, based on the historical information.

Significant assumptions used in impairment testing of brand-related assets as at December 31, 2018 are as follows:

Recoverable amounts	Growth rate (*1)	Discount rate (*2)
Usage value	1.0%	11.5 ~14.8%

(*1) Future cash flows for additional periods after the estimated period are estimated using a fixed growth rate.

(*2) The discount rate was estimated by adding risk premium to weighted average cost of capital.

As a result of impairment test of brand contract-related assets, the carrying amount does not exceed the recoverable amount, so there is no impairment loss recognized during the current reporting period.

13. Borrowings and bonds payable

(1) Short-term borrowings

Details of short-term borrowings as at December 31, 2018 and 2017 are as follows (Korean won in millions):

Description	Financial institution	Interest rate (%)	December 31, 2018	December 31, 2017
Working capital loan	Shinhan Bank	2.78	₩ 200,000	₩ 220,000
Working capital loan	Woori Bank	2.96	150,000	250,000
Working capital loan	Industrial & Commercial	2.90	60,000	-
	Bank of China			
Working capital loan	KEB Hana Bank	-	-	50,000
Working capital loan	NH Bank	-	-	10,000
Commercial paper	Korea Investment	2.29	200,000	250,000
	& Securities			
Commercial paper	KB Securities	2.10	200,000	-
Commercial paper	NH Investment			
	& Securities	2.10	100,000	
			₩ 910,000	₩ 780,000

(2) Bonds payable

Details of bonds payable as at December 31, 2018 and 2017 are as follows (Korean won in millions):

Issuance number	Interest rate (%)	Maturity	Security	Dec	ember 31, 2018	Dec	cember 31, 2017
257-2nd	3.36	2019-08-27	Unsecured	₩	100,000	₩	100,000
258-2nd	3.35	2019-10-19	Unsecured		100,000		100,000
259-2nd	3.34	2020-06-03	Unsecured		100,000		100,000
260-1st	3.59	2018-09-06	Unsecured		-		100,000
260-2nd	3.84	2020-09-06	Unsecured		100,000		100,000
261-1st	3.77	2018-12-03	Unsecured		-		150,000
261-2nd	3.97	2020-12-03	Unsecured		100,000		100,000
262-1st	3.43	2019-02-12	Unsecured		150,000		150,000
262-2nd	3.68	2021-02-12	Unsecured		100,000		100,000
263-1st	3.19	2019-05-30	Unsecured		150,000		150,000
263-2nd	3.36	2021-05-30	Unsecured		100,000		100,000
264-1st	3.04	2019-08-05	Unsecured		80,000		80,000

13. Borrowings and bonds payable (cont'd)

lssuance number	Interest rate (%)	Maturity	Security	December 31, 2018	December 31, 2017
264-2nd	3.25	2021-08-05	Unsecured	₩ 170,000	
265-2nd	2.45	2019-12-02	Unsecured	100,000	100,000
265-3rd	2.66	2021-12-02	Unsecured	100,000	100,000
266-1st	2.26	2020-02-06	Unsecured	150,000	150,000
266-2nd	2.39	2022-02-06	Unsecured	100,000	100,000
269-2nd	4.12	2019-06-14	Unsecured	150,000	150,000
270-2nd	3.39	2019-11-02	Unsecured	50,000	50,000
270-3rd	3.80	2022-11-02	Unsecured	50,000	50,000
271-1st	3.03	2018-02-27	Unsecured	-	100,000
271-2nd	3.34	2020-02-27	Unsecured	100,000	100,000
272-2nd	3.57	2018-08-30	Unsecured	-	100,000
272-3rd	3.92	2020-08-30	Unsecured	60,000	60,000
273-1st	3.47	2019-03-25	Unsecured	100,000	100,000
273-2nd	3.79	2021-03-25	Unsecured	100,000	100,000
273-3rd	4.26	2024-03-25	Unsecured	100,000	100,000
274-1st	1.94	2018-09-30	Unsecured	-	70,000
274-2nd	2.17	2020-09-30	Unsecured	150,000	150,000
274-3rd	2.34	2022-09-30	Unsecured	80,000	80,000
275-1st	2.27	2018-12-07	Unsecured	-	120,000
275-2nd	2.52	2020-12-07	Unsecured	120,000	120,000
275-3rd	2.66	2022-12-07	Unsecured	60,000	60,000
276-1st	1.73	2018-03-07	Unsecured	-	130,000
276-2nd	2.02	2021-03-07	Unsecured	120,000	120,000
276-3rd	2.26	2023-03-07	Unsecured	150,000	150,000
277-1st	1.70	2018-06-01	Unsecured	-	100,000
277-2nd	1.93	2021-06-01	Unsecured	120,000	120,000
277-3rd	2.16	2023-06-01	Unsecured	120,000	120,000
277-4th	2.43	2026-06-01	Unsecured	60,000	60,000
278-1st	1.49	2018-09-07	Unsecured	-	180,000
278-2nd	1.65	2021-09-07	Unsecured	110,000	110,000
278-3rd	1.80	2023-09-07	Unsecured	110,000	110,000
279-1st	1.96	2020-03-06	Unsecured	90,000	90,000
279-2nd	2.34	2022-03-06	Unsecured	190,000	190,000
279-3rd	2.58	2024-03-06	Unsecured	120,000	120,000
280-1st	1.99	2020-06-01	Unsecured	90,000	90,000
280-2nd	2.39	2022-06-01	Unsecured	200,000	200,000
280-3rd	2.67	2024-06-01	Unsecured	110,000	110,000
281-1st	1.90	2019-08-04	Unsecured	100,000	100,000
281-2nd	2.40	2022-08-04	Unsecured	130,000	130,000
281-3rd	2.62	2024-08-04	Unsecured	70,000	70,000
282-1st	2.47	2020-10-25	Unsecured	70,000	70,000
282-2nd	2.79	2022-10-25	Unsecured	150,000	150,000
282-3rd	2.86	2024-10-25	Unsecured	80,000	80,000
283-1st 283-2nd	2.88	2023-02-27	Unsecured	150,000	-
283-3rd	2.99 3.26	2025-02-27 2028-02-27	Unsecured Unsecured	60,000 100,000	-
284-1st	2.87	2023-06-08	Unsecured	170,000	-
284-2nd	3.01	2025-06-08	Unsecured	60,000	-
284-3rd	3.09	2028-06-08	Unsecured	100,000	_
285-1st	2.36	2023-09-06	Unsecured	150,000	_
285-2nd	2.47	2025-09-06	Unsecured	60,000	_
285-3rd	2.55	2028-09-06	Unsecured	120,000	-
286-1st	2.20	2021-11-29	Unsecured	130,000	_
286-2nd	2.20	2023-11-29	Unsecured	100,000	-
200 2110	2.01	2020 11-20	Childentia	6,210,000	6,060,000
Addition: premium c	on bonds pavable			7,701	26,788
Less: current portion				(1,083,112)	
				₩ 5,134,589	
				<u> 0,10-7,000</u>	

13. Borrowings and bonds payable (cont'd)

(3) The Company's bonds payable repayment schedule as at December 31, 2018 is as follows (Korean won in millions):

Year ending	Amour	t of repayment
December 31, 2019	\mathbf{W}	1,080,000
December 31, 2020		1,130,000
December 31, 2021		1,050,000
December 31, 2022		960,000
December 31, 2023 and thereafter		1,990,000
	\overline{W}	6,210,000

14. Provisions

Changes in provisions for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the year ended December 31, 2018						
	Beginning balance	<u>e</u>	Increase		Decrease	En	ding balance
Provision for service warranties	₩ 4,98	8 ₩	3,333	₩	(5,283)	₩	3,038
Provision for sale warranties	2,96	1	392	_	(3,187)		166
	₩ 7,94	9 ₩	3,725	₩	(8,470)	₩	3,204

	For the year ended December 31, 2017									
	Be	ginning		-			H	leld	End	ding
	B	alance	In	crease	Dee	crease	for s	<u>ale (*1)</u>	bala	ance
Provision for service warranties	₩	5,284	₩	5,360	₩	(5,656)	₩	- \	ł	4,988
Provision for sale warranties		814		8,936		(5,288)		(1,501)		2,961
	₩	6,098	₩	14,296	₩	(10,944)	₩	(1,501) ₩	Ŧ	7,949

(*1) The amounts were transferred to liabilities held for sale during the previous reporting period.

The Company estimates a provision for service warranties for revenue from projects based on historical claim rates and past experiences. The Company recognizes a provision for sales warranties for products sold and services rendered, based on the weighted average of possible outcomes.

15. Retirement benefit obligation

(1) Defined contribution plans

The Company partly operates a defined contribution plan for certain employees. The expenses related to the defined contributions plans recognized for the year ended December 31, 2018, were ₩32 million.

(2) Defined benefit plans

Those employees selecting the defined benefit plans shall be paid fixed amounts upon retirement, where certain conditions are met. In addition, the Company uses the projected unit credit method based on actuarial assumptions for the defined obligation and plan assets.

15. Retirement benefit obligation (cont'd)

(3) Details of retirement benefit obligation as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	Decen	nber 31, 2018	Dece	ember 31, 2017
Present value of defined benefit obligation	${\mathbb W}$	297,845	₩	254,398
Fair value of plan assets		(253,442)		<u>(215,599</u>)
	₩	44,403	₩	38,799

(4) Changes in the retirement benefit obligation for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the year ended December 31, 2018					
		ent value defined		r value of		
	÷.	t obligation		n assets		Total
					117	
Beginning balance	₩	254,398	₩	(215,599)	₩	38,799
Provision for pension benefits:						
Current service cost		30,356		-		30,356
Net interest expense (income)		7,239		(6,421)		818
Remeasurement:						
Return on plan assets (excluding amounts						
included in net interest expense)		-		3,110		3,110
Actuarial changes arising from changes						
in demographic assumptions		5,080		-		5,080
Actuarial changes arising from changes		- ,				- ,
in financial assumptions		10,867		-		10,867
Contributions by employer directly to plan assets		-		(46,900)		(46,900)
Benefit paid		(15,507)		13,211		(2,296)
Others		5,412		(843)		4,569
Ending balance	11/	297.845	₩	(253.442)	₩	44.403
Linuing balance	VV	237,040	V V	(200,442)	<u>v</u> v	44,403

	For the year ended December 31, 2017					, 2017
	Prese	nt value				
	of de	efined	Fair	value of		
	benefit o	obligation	plan	assets		Total
Beginning balance	₩	237,311	₩	(204,244)	₩	33,067
Provision for pension benefits:				. ,		
Current service cost		30,296		-		30,296
Net interest expense (income)		5,782		(5,173)		609
Remeasurement:				,		
Return on plan assets (excluding amounts						
included in net interest expense)		-		1,074		1,074
Actuarial changes arising from changes						
in demographic assumptions		4,688		-		4,688
Actuarial changes arising from changes						
in financial assumptions		(4,327)		-		(4,327)
Contributions by employer directly to plan assets		-		(29,700)		(29,700)
Benefit paid		(14,389)		(14,433)		44
Others		8,311		(5,555)		2,756
Transfer to liabilities held for sale (*1)		(13,274)		13,566		292
Ending balance	₩	254,398	₩	<u>(215,599</u>)	₩	38,799

(*1) The amounts were transferred to liabilities held for sale during the previous reporting period

15. Retirement benefit obligation (cont'd)

(5) The components of plan assets as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	Decem	nber 31, 2018	Decen	nber 31, 2017
Debt instruments	\mathbf{W}	32,055	₩	29,629
Deposits and others		221,387		185,970
-	\mathbb{W}	253,442	₩	215,599

(6) Principal actuarial assumptions

The principal assumptions used in actuarial calculation as at December 31, 2018 and 2017 are as follows:

	December 31, 2018	December 31, 2017
Discount rate for defined benefit obligations	2.67%, 2.71%	3.16%, 3.17%
Expected rate of salary increase	3.24%, 4.00%	3.24%, 4.00%

(7) The sensitivity analysis for significant actuarial assumptions as at December 31, 2018, is as follows (Korean won in millions):

	Impact on the defined benefit obligation					
	Sensitivity level	Increase		Decrease		
Discount rate	0.5%	₩	(13,031)∛	∀ 14,075		
Expected rate of salary increase	0.5%		13,845	(12,952)		

The sensitivity analysis above has been done under the assumption that all other variables remain unchanged. However, actual results may change through the interaction among other variables.

16. Other assets and liabilities

(1) Details of other assets as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 3	1, 2018	December 31	, 2017
Current assets:				
Accrued income	\overline{W}	118	₩	112
Advance payments		8,476		1,572
Prepaid expenses		11,793		11,300
Guarantee deposits		112		1
Derivative financial assets		34		599
Others		79		19
	₩	20,612	₩	13,603
Non-current assets:				
Long-term financial instruments	₩	19	₩	19
Long-term loans		397		397
Long-term guarantee deposits		21,074		10,829
Derivative financial assets		175,993		3,015
Others		127		125
	₩	197,610	₩	14,385

16. Other assets and liabilities (cont'd)

(2) Details of other liabilities as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018			per 31, 2017
Current liabilities:				
Advance received	₩	63,774	\mathbb{W}	88,807
Withholdings		38,348		23,600
Income tax payable		122,873		22,824
Derivative financial liabilities		146		51
	\mathbb{W}	225,141	₩	135,282
Non-current liabilities:				
Leasehold deposits received	₩	6,210	₩	11,775
Derivative financial liabilities		240,169		2,685
long-term employee benefits		10,100		6,720
	₩	256,479	₩	21,180

17. Derivative financial assets and liabilities

The Company has entered into foreign currency forward contracts to manage fluctuations in currency exchange rates relating to its contracts denominated in foreign currencies. Details of assets and liabilities after valuation as at December 31, 2018 and 2017 are as follows (Korean won in millions):

		December 31, 2018				December 31, 2017			
		Assets		Liabilities		Assets	L	<u>iabilities</u>	
Forward contract	₩	34	₩	146	₩	599	₩	51	
Embedded derivative		-		-		2,538		-	
Shareholders' agreement									
(see Note 29)		175,993		240,169		477		2,685	
	₩	176,027	₩	240,315	₩	3,614	₩	2,736	

18. Equity

18.1 Issued capital

Details of issued capital as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	Dece	ember 31, 2018	December 31, 2017		
Number of shares authorized for issued		400,000,000		400,000,000	
Par value per share (Korean won)	\overline{W}	200	₩	200	
Number of shares issued:					
Ordinary share		70,360,297		70,360,297	
Preferred share		566,135		566,135	
Issued capital:					
Ordinary share	\mathbf{W}	15,272	₩	15,272	
Preferred share		113		113	
	₩	15,385	₩	15,385	

The Company retired 6,000,000 shares of its treasury stock (par value: #1,200 million) by reducing retained earnings, which resulted in a difference between total par value of ordinary shares and issued capital.

18.2 Other paid-in capital

Details of other paid-in capital as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	Decem	nber 31, 2018	December 31, 2017		
Paid-in surplus (*1)	\mathbb{W}	5,605,831	₩	5,605,831	
Treasury stock (*2)		(904,493)		(904,491)	
Stock option		2,807		1,220	
Others		(292,892)		17,711	
	$\overline{\mathbb{W}}$	4,411,253	₩	4,720,271	

- (*1) During the year ended December 31, 2015, the Company repurchased treasury stocks of ₩3,369,310 million from merger with SK Holdings Co., Ltd. which was recognized as a contraequity account on additional paid-in capital.
- (*2) As at December 31, 2018, treasury stock consists of those acquired to increase the enterprise value and to stabilize share price (3,514,276 ordinary shares), and those acquired from repurchase of shares from dissenting shareholders on business combination and shares arising from odd lot shares (11,021,669 ordinary shares and 1,818 preferred shares) during the previous reporting period. Out of those shares, 5 ordinary shares are acquired during the current reporting period.

18.3 Retained earnings

Details of retained earnings as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	Decem	ber 31, 2018	Dece	mber 31, 2017
Legal reserve (*1)	\overline{W}	7,693	₩	7,693
Voluntary reserve		65,230		71,563
Unappropriated retained earnings		8,670,604		7,506,334
	\overline{W}	8,743,527	\mathbb{W}	7,585,590

(*1) In accordance with the *Korean Commercial Code*, an amount equal to at least 10% of cash dividends is required to be appropriated as a legal reserve until the reserve equals 50% of issued capital. The legal reserve may not be utilized for cash dividends but may only be used to offset a deficit, if any, or be transferred to issued capital through approval at the general meeting of the shareholders.

18.4 Statements of appropriation of retained earnings

The statements of appropriation of retained earnings for the years ended December 31, 2018 and 2017, are as follows (Korean won in millions):

	For the years ended					
	Dece	mber 31, 2018	Decen	ecember 31, 2017		
I . Unappropriated retained earnings	\mathbb{W}	8,670,604	₩	7,506,334		
Unappropriated retained earnings carried over from prior years		7,287,084		6,895,301		
Effect of changes in accounting policies		1,156		-		
Interim dividends		(56,388)		-		
Net income		1,453,631		612,121		
Remeasurement loss on defined benefit plans		(14,879)		(1,088)		
${\mathbb I}.$ Transfer from voluntary reserves		2,333		6,333		
III. Appropriation of retained earnings		(225,583)		(225,583)		
Dividends Legal reserve		(225,583)		(225,583)		
IV. Unappropriated retained earnings						
to be carried forward to the next year	₩	8,447,354	₩	7,287,084		

18.5 Other capital components

Details of other capital components as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	Decemb	<u>per 31, 2018</u>	December 31, 2017		
Gain on available-for-sale financial assets	\overline{W}	-	\mathbb{W}	11,455	
Net gain on valuation of financial assets					
measured at FVOCI		(2,029)		-	

18.6 Stock option

Upon resolution by the shareholders and the Board of Directors, the Company established a stock option program that entitles key management personnel an option to purchase ordinary shares. The terms and conditions related to the stock options granted under the share option program are as follows:

	1-1	1-2	1-3					
Grant date	2017-03-24							
Type of shares to be issued	Ordinary shares							
Grant method	Reissue of treasury shares, but if the stock option's exercise price is							
	lower than the stock's	real price (evaluated ba	sed on exercise date),					
	the Company may sett	le the difference in cash	n or with treasury stock					
	equivalent to the different	ence amount.						
Number of shares (shares)	41,429	41,430	41,431					
Exercise price (Korean won)	₩ 226,290	₩ 244,400	₩ 263,950					
Contractual life of options	2019.03.25	2020.03.25	2021.03.25					
	~2022.03.24	~2023.03.24	~2024.03.24					
Vesting conditions	2 year service from	3 year service from	4 year service from					
	the grant date	the grant date	the grant date					

Share compensation expense recognized during the current reporting period is \$1,586 million (accumulated share compensation expense: \$2,806 million) and the remaining share compensation expense to be recognized in later periods are \$1,481 million.

The Company used the binomial option pricing model, and the inputs used in the measurement of the fair values at the grant date of the share-based payment plans are as follows:

		1-1		1-2		1-3
Risk-free interest rate		1.86%		1.95%		2.07%
Option life		5 years		6 years		7 years
Expected price (Closing price on the preceding day in Korean won)	₩	236,000	₩	236,000	₩	236,000
Expected volatility		16.78%		16.78%		16.78%
Rate of returns		1.60%		1.60%		1.60%
Exercise price (Korean won)	₩	226,290	₩	244,400	₩	263,950
Fair value per share (Korean won)	₩	38,317	₩	34,200	₩	30,962

19. Dividends

(1) Details of dividends proposed for approval at the annual ordinary shareholders' meeting for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

		For the years ended							
		December 31, 2018				December 31, 2017			
	Or	Ordinary share Preferred share		Or	Ordinary share		eferred share		
Number of shares (*1)		55,824,347		564,317		55,824,352		564,317	
Par value per share (Korean won)	₩	200	₩	200	₩	200	₩	200	
Dividend rate		2,000%		2,025%		2,000%		2,025%	
Dividends	₩	223,297	₩	2,286	₩	223,297	₩	2,286	

(*1) Total issued shares, less the number of treasury shares.

(2) Details of calculation of dividend payout ratio for the years ended December 31, 2018 and 2017, are as follows (Korean won in millions):

		For the years ended			
	Decem	ber 31, 2018	December 31, 2017		
Dividends	\mathbb{W}	225,583	₩ 225,583		
Net income		1,453,631	612,121		
Dividend payout ratio		15.52%	36.85%		

(3) Details of calculation of dividend yield ratio for the years ended December 31, 2018 and 2017, are as follows (Korean won):

	For the years ended					
	Decembe	r 31, 2018	Decembe	er 31, 2017		
	Ordinary share	Preferred share	Ordinary share	Preferred share		
Dividend per share	₩ 4,000	₩ 4,050	₩ 4,000	₩ 4,050		
Last price	260,000	127,500	283,000	163,500		
Dividend yield ratio	1.54%	3.18%	1.41%	2.48%		

20. Operating revenues

(1) Details of operating revenues for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

		For the ye	ears ended	
		December 31, 2018	_	December 31, 2017
Revenue from contracts with customers:				
IT service (*1)	₩	1,559,058	₩	1,554,465
Trademark usage income		235,287		185,285
Others		828		20
		1,795,173		1,739,770
Revenue from other sources	:			
Dividend income	₩	830,877	₩	691,837
Rental income		46,362		46,233
		877,239	<u> </u>	738,070
Total	₩	2,672,412	₩	2,477,840

(*1) Includes contract revenue of ₩858,301 million recognized from the cost-based input method for the years ended December 31, 2018 and ₩432,442 million recognized from construction contract for the years ended December 31, 2017.

20. Operating revenues (cont'd)

(2) Revenue from contracts with customers

Dece	mber 31, 2018
\mathbf{W}	1,559,058
	235,287
	828
\overline{W}	1,795,173
\overline{W}	1,631,232
	147,494
	10,668
	<u>5,779</u>
\overline{W}	1,795,173
\mathbf{W}	140,794
	1,654,379
\mathbb{W}	1,795,173
	₩ ₩ ₩ ₩

(3) Details of contract assets, contract liabilities related to revenue from contracts with customers as at December 31, 2018 and accumulated cost, accumulated profit, unbilled receivables, overbilled receivables related to construction contracts in progress as at December 31, 2017 are as follows (Korean won in millions):

	Decemb	oer 31, 2018		January 1, 2018
Contract assets from IT service contract	\overline{W}	138,098	₩	134,565
Contract liabilities from IT service contract (*1)		63,753		60,468

(*1) The amount recognized as revenue in the current period in relation to the contract liabilities in the beginning of the current term is $\frac{1}{4}43,094$ million and there is no revenue recognized in the current period in relation to the performance obligation satisfied in the prior term.

	Decer	mber 31, 2017
Accumulated cost and profit	$\overline{\mathbf{W}}$	277,259
Progress billings		235,568
Unbilled receivables (trade accounts receivable)		63,331
Overbilled receivables (advance receipts)		21,640

(4) Details of profit variation by changes of accounting estimates related to the cost-based input method contracts as at December 31, 2018 are as follows (Korean won in millions):

	Change in				
	estimated		Impact on	Impact on	Change in
	construction	Change in	current period	future period	unbilled construction receivables
	revenue	estimated cost	profit (loss)	profit (loss)	(overbilled construction receivables)
IT Service contracts (*1)	₩ 18,168	₩ 17,138	₩ (484)	₩ 1,514	₩ (484)

(*1) For the purpose of KIFRS 1108 *Operating Segments*, the Company has a single reportable segment and therefore need not separately disclose the business segment.

Impact on profit of current and future period has been calculated by the estimated costs based on the situations which occurred from the inception of IT service contract to current reporting period and the estimated revenue as at current reporting period. Estimated cost and revenue can be changed in the future period.

(5) There are no contracts applying the cost-based input method to measure the percentage-ofcompletion with total contract revenue exceeding prior year's operating income by more than 5%

21. Operating expenses

Details of operating expenses for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the years ended			
	December 31, 2018	December 31, 2017		
Material costs	₩ 144,875	₩ 267,466		
Outsourcing costs	710,264	624,583		
Salaries	344,921	344,038		
Provision for pension benefits	31,430	28,184		
Depreciation	48,044	44,954		
Rents	42,488	39,774		
Communications	20,550	21,586		
Employee welfare benefits	52,012	49,216		
Commissions	40,932	28,493		
Education and training	19,631	17,311		
Research and development	27,332	21,039		
Office management	45,473	38,861		
Travel	16,004	13,390		
Others	67,491	<u> </u>		
	₩ 1,611,447	₩ 1,608,374		

22. Expenses classified based on nature of expense

Details of classification based on nature of expenses for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the years ended				
	Decem	ber 31, 2018	December 31, 2017		
Material costs	₩	144,893	₩	267,989	
Outsourcing costs		711,265		625,527	
Salaries		358,465		353,078	
Provision for pension benefits		32,880		29,432	
Depreciation and amortization		65,404		59,083	
Rents		42,489		39,778	
Communications		20,552		21,619	
Employee welfare benefits		54,219		50,979	
Commissions		41,388		28,903	
Education and training		19,933		17,579	
Office management		45,473		38,861	
Travel		16,198		13,490	
Others		58,288		62,056	
	₩	1,611,447	₩	1,608,374	

23. Financial income (costs) and other non-operating income (expenses)

23.1 Financial income and costs

Details of financial income and costs for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the years ended			
	December 31, 2018	December 31, 2017		
Financial income:				
Interest income	₩ 6,818	₩ 4,559		
Gain on foreign currency transactions	7,546	5,647		
Gain on foreign currency translation	138	1,003		
Gain on valuation of financial assets				
measured at FVTPL (*1)	36,586	-		
Gain on valuation of derivative instruments	178,280	4,092		
Gain on transactions of derivative instruments	6,513	2,652		
	₩ 235,881	₩ 17,953		
	For the ye	ears ended		
	December 31, 2018	December 31, 2017		
Financial costs:				
Interest expenses	₩ 176,033	₩ 152,787		
Loss on foreign currency transactions	4,344	5,497		
Loss on foreign currency translation	230	2,250		
Loss on valuation of financial assets measured				
at FVTPL	1,220	-		
Loss on valuation of derivative instruments	240,668	6,102		
Loss on transactions of derivative instruments	19,501	1,631		
	₩ 441,996	₩ 168,267		

(*1) Gain on valuation of financial assets measured at FVTPL includes #14,726 million of valuation gain on SK Securities incurred up to July 30, 2018, the date SK Securities, classified as assets held-for-sale as at December 31, 2017, was sold.

23. Financial income (costs) and other non-operating income (expenses) (cont'd)

23.2 Other non-operating income and expenses

Details of other non-operating income and expenses for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the years ended			
	Decen	nber 31, 2018	Decem	nber 31, 2017
Other non-operating income:				
Dividends income	₩	-	₩	3
Gain on disposal of available-for-sale financial assets		-		241
Gain on disposal of investments in				
subsidiaries and associates (*1)		671,817		38,791
Gain on disposal of property, plant and equipment		134,073		172
Gain on disposal of intangible assets		518		225
Others		1,940		430
	₩	808,348	₩	39,862
Other non-operating expenses:				
Loss on disposal of available-for-sale financial assets	₩	-	₩	158
Impairment of available-for-sale financial assets		-		90,790
Loss on disposal of investments in				
subsidiaries and associates		6,536		4,009
Impairment of investments in				
subsidiaries and associates		3,417		-
Loss on disposal of property, plant and equipment		180		22
Loss on disposal of intangible assets		101		45
Impairment of intangible assets		2,398		-
Donations		67,568		15,959
Others		1,720		4,795
	₩	81,920	₩	115,778

(*1) Gain on disposal of investments in subsidiaries and associates includes ₩192,191 million of gain on disposal of investments in subsidiaries incurred by the disposal of SK Encarsales.com Ltd. on January 19, 2018, which was classified as assets held-for-sale as at December 30, 2017.

24. Income taxes

(1) Components of income tax expense for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the years ended			
	Decem	ber 31, 2018	Decemb	er 31, 2017
Current income tax	\mathbb{W}	147,716	₩	46,633
Deferred income tax		15,388		(4,146)
Deferred tax charged directly to the equity:				
Net gain on valuation of available-for-sale				
financial assets		-		(1,090)
Net gain on valuation of financial assets				
measured at FVOCI		(68)		-
Remeasurement loss on defined benefits plans		4,750		347
Income tax expense	₩	167,786	₩	41,744

(2) A reconciliation of income before income tax at the Korea statutory tax rate to income tax expense at the effective income tax rate of the Company for the years ended December 31, 2018 and 2017 is as follows (Korean won in millions):

		ars ended		
	Decen	nber 31, 2018	Decembe	er 31, 2017
Income before income tax expense	₩	1,621,417	₩	653,865
Income from continuing operations before income tax expense		1,581,278		643,236
Income from discontinued operations before income tax expense		40,139		10,629
Income tax at statutory income tax rate (*1) Adjustments:		435,528		157,769
Non-taxable revenue		(162,140)		(125,595)
Non-deductible expenses		2,886		5,059
Tax credit		(2,615)		(550)
Unrecognized deferred income tax		(68,698)		27,468
Tax effects of the consolidated tax return Adjustments in respect of current income		(38,062)		(23,663)
tax of prior year		1,561		1,390
Others		<u>(674</u>)		(134)
		(267,742)		(116,025)
Income tax expense	₩	167,786	₩	41,744
Income tax expense from continuing operations		158,584		39,133
Income tax benefits from discontinued operations		9,202		2,611
Effective tax rate		10.35%		6.26%

(*1) The Company is subject to corporate income taxes (at the aggregate rates of 10% on taxable income of up to ₩200 million, 20% on taxable income in the range of ₩200 million to ₩20,000 million, 22% on taxable income in range of ₩ 20,000 million to ₩ 30,000 million and 25% on taxable income in excess of ₩ 30,000 million) and local income tax (10% of corporate income tax).

24. Income taxes (cont'd)

(3) Changes in deferred income tax assets (liabilities) for the years ended December 31, 2018 and 2017, are as follows (Korean won in millions):

	For the year ended December 31, 2018								
		Effect of changes		Recognized					
	Beginning	in the accounting	Recognized	directly	Ending				
	balance	policies	profit or loss	in equity	balance				
Provisions	₩ 2,125	₩ -	₩ (1,350)	₩ - 3	₩ 775				
Investments in associates and subsidiaries	14,521	-	157	-	14,678				
Advanced depreciation provision	(17,833) -	857	-	(16,976)				
R&D reserve	(565) -	565	-	-				
Long-term investment instrument (Available-for-sale financial assets)	24,346	3,975	(56,131)	(68)	(27,878)				
Depreciation	(1,882) -	5,082	-	3,200				
Deemed cost of land and buildings	(26,381) -	22,792	-	(3,589)				
Accrued bonuses and others	16,280	-	(935)	-	15,345				
Retirement benefit obligation	146	-	(4,088)	4,750	808				
Treasury shares	171,092	-	-	-	171,092				
Intangible assets	(477,935) -	124	-	(477,811)				
Bonds payable	20,878	-	(3,365)	-	17,513				
Others	17,868	26	16,221		34,115				
	₩ (257,340) ₩ 4,001	<u>₩ (20,071</u>)	₩ 4,682	₩ <u>(268,728</u>)				

	For the year ended December 31, 2017									
		Effect of changes		Recognized						
	Beginning	in the accounting	Recognized	directly	Ending					
	balance	policies	profit or loss	in equity	balance					
Provisions	₩ 1,571	₩ 95	₩ -	₩ 459	₩ 2,125					
Investments in associates and subsidiaries	32,873	(18,352)) -	-	14,521					
Advanced depreciation provision	(17,833)	-	-	-	(17,833)					
R&D reserve	(2,097)	1,532	-	-	(565)					
Available-for-sale financial assets	3,467	21,969	(1,090)) –	24,346					
Depreciation	(1,875)	(8)) -	1	(1,882)					
Deemed cost of land and buildings	(26,926)	545	-	-	(26,381)					
Accrued bonuses and others	12,468	3,325	-	487	16,280					
Retirement benefit obligation	639	(870)) 347	30	146					
Treasury shares	171,092	-	-	-	171,092					
Intangible assets	(477,935)	-	-	-	(477,935)					
Bonds payable	24,832	(3,954)) -	-	20,878					
Others	15,945	607		1,316	17,868					
	₩ (263,779)	₩ 4,889	₩ (743)	₩ 2,293	<u>₩ (257,340</u>)					

(4) Details of temporary differences for which no deferred tax assets (liabilities) were recognized as at December 31, 2018 and 2017 are as follows (Korean won in millions):

	Dece	mber 31, 2018	December 31, 2017		
Taxable temporary differences:					
Investments in subsidiaries and others	₩	5,803,498	₩	5,157,187	
Gain on transfer for investment in kind		90,687		90,687	
Goodwill		-		4,639	
Deductible temporary difference:					
Investments in subsidiaries and others		<u>(886,719</u>)		(756,972)	
	\overline{W}	5,007,466	\mathbb{W}	4,495,541	

25. Earnings per share

(1) Basic earnings per share for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions, except per share information):

	For the years ended							
	December 31, 2018		Dece	mber 31, 2017				
Net income	₩	1,453,631	₩	612,121				
Less: preferred share dividends		(2,850)		(2,286)				
Net income attributable to ordinary share owners of the Company	₩	1,450,781	₩	609,835				
Weighted-average number of issued shares outstanding (*1)		55,824,350		55,824,357				
Basic earnings per share (Korean won)	₩	25,988	₩	10,924				

(*1) Weighted-average number of issued shares represents the number of shares less treasury shares from the total number of issued shares of ordinary share.

(2) The weighted-average number of issued shares outstanding for the years ended December 31, 2018 and 2017 are as follows:

	For the years ended					
	December 31, 2018	December 31, 2017				
Weighted-average number of shares outstanding	70,360,297	70,360,297				
Weighted-average number of treasury shares	(14,535,947)	(14,535,940)				
Weighted-average number of issued shares outstanding	55,824,350	55,824,357				

(3) Basic earnings per share from continuing operations

	For the years ended							
	Dec	ember 31, 2018	Dece	ember 31, 2017				
Net income attributable to ordinary shares	₩	1,450,781	₩	609,835				
Less: gain from discontinued operations		(30,937)		<u>(8,018</u>)				
Gain from continuing operations attributable to ordinary shares	₩	1,419,844	₩	601,817				
Weighted-average number of issued shares outstanding Basic earnings per share from continuing operations		55,824,350		55,824,357				
(Korean won)	₩	25,434	₩	10,781				

(4) Basic earnings per share from discontinued operations

	For the years ended					
	Decer	mber 31, 2018	Dece	ember 31, 2017		
Gain from discontinued operations	₩	30,937	₩	8,018		
Weighted-average number of issued shares outstanding		55,824,350		55,824,357		
Basic earnings per share from discontinued operations						
(Korean won)	₩	554	₩	143		

26. Transactions with related parties

Details of significant transactions with related parties for the years ended December 31, 2018 and 2017, and significant balances with related parties as at December 31, 2018 and 2017 are as follows (Korean won in millions):

(1) The subsidiaries of the Company as at December 31, 2018, are as follows:

	Subsidiary
Ultimate controlling party Subsidiary (total 260)	Tae-won, Chey and related parties SK Innovation Co., Ltd., SK Energy Co., Ltd., Netruck Co., Ltd., Jeju United FC Corporation, SK Energy Road Investment Co., Ltd., SK Energy Hong Kong Co., Ltd., Shandong SK Hightech Oil Co., Ltd., SK Energy Road Investment (HK) Co., Ltd., Ningbo SK Baoying Asphalt Storage Co., Ltd., Hefei SK Baoying Asphalt Co., Ltd., Chongqing SK Asphalt Co., Ltd., SK Asphalt (Shanghai) Co., Ltd., SK Global Chemical Co., Ltd., SK Global Chemical (China) Holding Co., Ltd., SK Global Chemical International Trading (Shanghai) Co., Ltd., SK Golden Tide Plastics (Yantai) Co., Ltd., SK Global Chemical International Trading (Guangzhou) Co., Ltd., SK Global Chemical Americas, Inc., SK Primacor Americas LLC, SK Primacor Europe, S.L.U., SK Saran Americas LLC, SK Global Chemical China Co., Ltd., SK Global Chemical Japan Co., Ltd., Ningbo SK Performance Rubber Co., Ltd., SK Global Chemical Japan Co., Ltd., SK Global Chemical Singapore Pte. Ltd., SK Global Chemical Investment Hong Kong Ltd., Ningbo SK Performance Rubber Co., Ltd., SK Incheon Petrochem Co., Ltd., SK Trading International Co., Ltd., SK Energy International Pte. Ltd., SK Energy Europe, Ltd., SK Energy Americas, Inc., SK Terminal B.V., SK Lubricants Co., Ltd., Yubase Manufacturing Asia Corporation, SK Energy Lubricants (Tianjin) Co., Ltd., PT. Patra SK, SK Lubricants Americas, Inc., SK Lubricants Europe B.V., SK Lubricants Japan Co., Ltd., SK Lubricants & Oils India Pte. Ltd., Iberian Lube Base Oils S.A., SK Lubricants Russia LLC, SK Mobile Energy Co., Ltd. (formerly, SK Battery China Holdings Co., Ltd., SK E&P Operations America, Inc., SK Plymouth, LLC, SK Permian, LLC, SK E&P Operations America, LLC, SK Nemaha, LLC, SK Telecom Co., Ltd., SK Telink Co., Ltd., SK Telink Vietnam Co., Ltd., SK Broadband Co., Ltd., Home&Service Co., Ltd., SK stoa Co., Ltd., K-Net Culture & Contents Venture Fund, One store Co., Ltd., SK Communications Co., Ltd., SK Planet Co., Ltd., 115treet Co., Ltd., ADT Security Holdings Co., Ltd., ADT Caps Co., Ltd., Capstek C
	Quantum Innovation Private Equity Joint Venture I, SK Infosec Co., Ltd., SK M & Service Co., Ltd., SK Planet Japan, K.K., SKP Global Holdings Pte. Ltd., SKP America, LLC, shopkick Management Company, Inc., shopkick, Inc., SK Telecom China Holdings Co., Ltd., SK Global Healthcare Business Group, Ltd., SKT Americas Inc., YTK Investment Ltd., Atlas Investment Ltd., SK Telecom Innovation Fund, L.P., SK Telecom China Fund I L.P., iriver Co., Ltd., iriver Inc., iriver Enterprise Ltd., iriver China Co., Ltd., Dongguan iriver Electronics Co., Ltd., groovers Co., Ltd., groovers Japan Co., Ltd., Dongguan Iniver Electronics Co., Ltd., groovers Co., Ltd., SK Networks Co., Ltd., SK telecom Japan Inc., id Quantique Ltd, id Quantique LLC, SK Networks Co., Ltd., SK Networks Service Co., Ltd., SK Pinx Co., Ltd., SK Magic Service Co., Ltd., KMagic Vietnam Company Limited, Mokgam Service, SK Networks (China) Holdings Co., Ltd., Liaoning SK Networks (Liaoning) Logistics Co., Ltd., SK Networks (Dandong) Energy Co., Ltd., SK Networks (Liaoning) Logistics Co., Ltd., SK Networks (Dandong) Energy Co., Ltd., SK Networks (Shanghai) Co., Ltd., POSK (Pinghu) Steel Processing Center Co., Ltd., SK Networks Processing Center Co., Ltd., SK Networks Japan Co., Ltd., SK Networks (Siamen) Steel Processing Center Co., Ltd., SK Networks SAN. VE TIC. Ltd. STI, SK Networks Resources Australia Pty. Ltd., SK Networks SAN. VE TIC. Ltd. STI, SK Networks Resources Australia Pty. Ltd., SK Networks Tejarat Pars, SK Networks Retails Malaysia Sdn. Bhd., SKC Co., Ltd., SKC Solmics Co., Ltd., ScW Co., Ltd., SKC Infra Service Co., Ltd., SKC Solmics Co., Ltd., SK Networks Co., Ltd., SKC Infra Service Co., Ltd., SKC Solmics Co., Ltd., SKW Co., Ltd.), SKC

Subsidiary Subsidiary (total 260) (Jiangsu) High tech Plastics Co., Ltd., SKC, Inc., SKC Europe GmbH, SK Bioland Co., Ltd., Bioland Biotec Co., Ltd., Bioland Haimen Co., Ltd., SKC Hi-Tech&Marketing Co., Ltd., SKC Hi-Tech&Marketing (Suzhou) Co., Ltd., SKC Hi-Tech&Marketing Taiwan Co., Ltd., SKC Hi-Tech&Marketing Polska SP.Z.O.O, SKC Hi-Tech&Marketing USA LLC, SKC PU Specialty Co., Ltd., SKC (Nantong) PU Specialty Co., Ltd, SKC-ENF Electronic Materials Ltd., SKC(Nantong) Semiconductor Materials Technology, Co., Ltd., SE (Jiangsu) Electronic Materials Co., Ltd., SK E&S Co., Ltd., Kangwon City Gas Co., Ltd., Yeongnam Energy Service Co., Ltd., Ko-one Energy Service Co., Ltd., Narae Energy Service Co., Ltd., Pusan City Gas Co., Ltd., Jeonbuk Energy Service Co., Ltd., Chonnam City Gas Co., Ltd., Chungcheong Energy Service Co., Ltd., Paju Energy Service Co., Ltd., Wirye Energy Service Co., Ltd., Yeoju Energy Service Co., Ltd., SK E&S Hong Kong Co., Ltd., SK E&S Australia Pty. Ltd., SK E&S Ameriacas, Inc., SK E&S LNG, LLC, DewBlaine Energy, LLC, CAILIP Gas Marketing, LLC, Prism Energy International Pte., Ltd., Fajar Energy International Pte. Ltd., Prism Energy International Hong Kong Ltd., PT SK E&S Nusantara, SK E&S Dominicana S.R.L., SK Engineering & Construction Co., Ltd., Seosuwon Development Company, SK TNS Co., Ltd., SKEC Nanjing Co., Ltd., SKEC (Thai), Ltd., Thai Woo Ree Engineering Co., Ltd., SKEC Anadolu, LLC, SK E&C Betek Corporation, Mesa Verde RE Ventures, LLC, SKEC Consultores Ecquador, S.A., Sunlake Co., Ltd., SK Holdco Pte. Ltd., SK Materials Co., Ltd., SK Materials Japan Co., Ltd., SK Materials Taiwan Co., Ltd., SK Materials (Jiangsu) Co., Ltd., SK Materials (Xian) Co., Ltd., SK Airgas Co., Ltd., SK Tri Chem Co., Ltd., SK Showa Denko Co., Ltd., SK Siltron Co., Ltd., SK Siltron America, Inc., SK Siltron Japan, Inc., SK Biopharmaceuticals Co., Ltd., SK Life Science, Inc., SK Biotek Co., Ltd., SK Biotek Ireland Limited, SK Biotek USA, Inc., SK S.E.Asia Pte. Ltd., Essencore Limited, Essencore (Shenzhen) Limited, SK China Company, Ltd., SKY Property Mgmt (Beijing) Co., Ltd., SK Bio Energy Hong Kong Co., Ltd., SK Property Investment Management Co., Ltd., SK Industrial Development China Co., Ltd., Shanghai SKY Real Estate Development Co., Ltd., SK China Investment Management Co., Ltd., SK International Agro-Products Logistics Development Co., Ltd., SK Auto Service Hong Kong Co., Ltd., SK (Shenyang) auto rental Co., Ltd., SK (Beijing) auto rental Co., Ltd., SK Rent-A-Car (Qingdao) Co., Ltd., Skyline Auto Financial Leasing Co., Ltd., SK Financial Leasing Co., Ltd., SK China (Beijing) Co., Ltd., SK Beijing Investment Management Ltd., SKY Property Management Ltd., SKY Investment Co., Ltd., SK China Real Estate Co., Ltd., SK China Creative Industry Development Co., Ltd., SK C&C Beijing Co., Ltd., SK C&C Chengdu Co., Ltd., SK C&C India Pvt. Ltd., S&G Technology, Saturn Agriculture Investment Co., Limited, SK Investment Management Co., Ltd., SK Semiconductor Investments Co., Ltd., SK Computer and Communication LLC, Gemini Partners Pte. Ltd., Solaris Partners Pte. Ltd., Beijing SK Magellan Capital Advisors Co., Ltd., SK GI Management, SK MENA Investment B.V., SK Latin America Investment S.A., Plutus Capital NY, Inc., Hudson Energy NY, LLC, Hudson Energy NY II, LLC, Atlas NY LLC, Plutus Fashion NY, Inc., Wonderland NY, LLC, SK Technology Innovation Company, SK South East Asia Investment Pte.Ltd., SK Investment Vina I Pte. Ltd., Alchemy Acquisition Corp., Abrasax Investment Inc., Fine Chemicals Holdings Corp., AMPAC Fine Chemicals, LLC, AMPAC Fine Chemicals Texas, LLC, AMPAC Fine Chemicals Virginia, LLC, Golden Pearl EV Solutions Limited, SK Forest Co., Ltd.

(2) Details of transactions with the related parties for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

		Sales (*1)					Purchase (*2)			
		Fc	or the years end	ded De	<u>cember 31,</u>	For	the years ende	d December 31,		
	Company name		2018		2017		2018	2017		
Subsidiary	SK Innovation Co., Ltd.	₩	344,359	₩	323,721	₩	2,709 🚻	⁷ 3,378		
	SK Energy Co., Ltd.		100,204		83,201		7	15		
	SK Global Chemical Co., Ltd.		29,183		27,284		-	-		
	SK Incheon Petrochem Co., Ltd.		22,810		16,245		3	21		
	SK Trading International Co., Ltd.		3,154		4,637		-	-		
	SK Lubricants Co., Ltd.		12,341		12,446		-	-		
	SK Biotek Co., Ltd.		4,722		4,051		2	-		
	SK USA, Inc.		73		-		2,081	2,084		
	SK Engineering & Construction Co., Ltd.		28,796		28,914		567	92		
	SKC Co., Ltd.		29,693		23,323		-	-		
	SK E&S Co., Ltd.		252,511		165,479		-	-		
	SK Infosec Co., Ltd.		20,696		4,849		15,164	21,284		
	SK C&C Beijing Co., Ltd.		5,335		460		8,489	10,797		
	SK S.E.ASIÁ Pte. Ltd.		78,979		-		-	-		
	Essencore Limited		4,745		4,144		-	-		
	SK Networks Co., Ltd.		54,353		61,644		4,943	30,634		
	SK Telecom Co., Ltd.		575,111		597,322		13,948	13,039		
	SK Telink Co., Ltd.		3,559		4,726		181	176		
	SK Broadband Co., Ltd.		131,772		193,846		8,971	10,213		
	PS&Marketing Corp.		5,196		3,649		367	1,809		
	SK Planet Co., Ltd. (*3)		29,024		45,717		350	2,358		
	SK Materials Co., Ltd.		23,217		23,582		-	-		
	Others		59,015		30,835		5,921	8,214		
Other related	Hana Land Chip PEF 33		3,322		3,273		35,430	33,996		
parties	SK hynix Inc.		695,718		295,608		387	218		
	SK hynix Semiconductor (China) Ltd.		45,400		3,330		1,302	443		
	Happynarae Co., Ltd.		4,174		646		6,641	5,813		
	Others		3,042		2,932		5,349	832		
Others (*4)	SK Securities Co., Ltd.		12,964		25,023		-	19		
	SK Gas Co., Ltd.		18,125		8,868		-	4		
	SK Discovery Co., Ltd.		408		5,103		-	-		
	SK Chemicals Co., Ltd.		4,738		460		-	-		
	SK Shipping Co., Ltd.		4,995		4,850		-	-		
	Others		3,754		10,996		1,025	3,371		
		₩	2,615,488	₩	2,021,164	₩	<u>113,837</u> ₩	148,810		

- (*1) Consists of dividends income received from subsidiaries and others, trademark usage income, rental income and others.
- (*2) Consists of rental expenses, outsourcing costs and others.
- (*3) SK Planet Co., Ltd. merged SK techx Co., Ltd. as at September 1, 2018. The transactions of SK techx Co., Ltd. are included in that of SK Planet Co., Ltd.
- (*4) Although, not designated as related parties as defined in paragraph 9 of KIFRS 1024, the entity is designated as related parties based on the resolution made by the Securities and Futures Commission that conglomerate affiliates designated by the Fair Trade Commission are related parties based on the substance of relation as regulated by paragraph 10 of KIFRS 1024.

(3) Details of outstanding balances of receivables and payables with the related parties as at December 31, 2018 and 2017 are as follows (Korean won in millions):

		December 31, 2018							
			F	Rec	eivables			Payables	
			Trade		Other		Trade	Other	
	Company name	rec	ceivables	re	eceivables	Total	payables	payables	Total
Subsidiary	SK Innovation Co., Ltd.	₩	23,492	₩	562	₩ 24,054	₩ -	₩ 11,293	₩ 11,293
	SK Energy Co., Ltd.		7,014		-	7,014	-	4,344	4,344
	SK Global Chemical Co., Ltd.		557		-	557	-	3,095	3,095
	SK Incheon Petrochem Co., Ltd.		1,079		-	1,079	-	1,747	1,747
	SK Trading International Co., Ltd.		-		-	-	-	2,055	2,055
	SK Lubricants Co., Ltd.		20		-	20	-	2,062	2,062
	SK USA, Inc.		-		-	-	-	824	824
	SK Engineering & Construction Co., Ltd.		3,226		-	3,226	-	149	149
	SKC Co., Ltd.		1,652		-	1,652	-	40	40
	SK E&S Co., Ltd.		1,994		-	1,994	-	139	139
	SK Infosec Co., Ltd.		1,057		-	1,057	897	3,006	3,903
	SK C&C Beijing Co., Ltd.		7,407		-	7,407	456	2,473	2,929
	Essencore Limited		1,048		-	1,048	-	102	102
	SK Networks Co., Ltd.		2,800		20	2,820	-	735	735
	SK Telecom Co., Ltd.		87,991		352	88,343	511	12,723	13,234
	SK Telink Co., Ltd.		243		-	243	11	15	26
	SK Broadband Co., Ltd.		51,360		-	51,360	418	966	1,384
	PS&Marketing Corp.		322		-	322	-	-	-
	SK Planet Co., Ltd.		7,326		-	7,326	-	199	199
	SK Materials Co., Ltd.		796		458	1,254	-	176	176
	Others		16,489		320	16,809	1,328	5,858	7,186
Other related	Hana Land Chip PEF 33		-		5,983	5,983	-	-	-
parties	SK hynix Inc.		160,789		-	160,789	-	8,880	8,880
	SK hynix Semiconductor (China) Ltd.		11,717		-	11,717	-	779	779
	Happynarae Co., Ltd.		2,031		-	2,031	453	634	1,087
	Others		457		139	596	1,095	1,280	2,375
Others (*1)	SK Gas Co., Ltd.		2,839		-	2,839	-	13	13
	SK Chemicals Co., Ltd.		712		-	712	-	2	2
	SK Shipping Co., Ltd.		470		-	470	-	-	-
	Others		655			655	114	131	245
		₩	395,543	₩	7,834	₩ 403,377	₩ 5,283	₩ 63,720	₩ 69,003

(*1) Although, not designated as related parties as defined in paragraph 9 of KIFRS 1024, the entity is designated as related parties based on the resolution made by the Securities and Futures Commission that conglomerate affiliates designated by the Fair Trade Commission are related parties based on the substance of relation as regulated by paragraph 10 of KIFRS 1024.

SK Holdings Co., Ltd. Notes to the separate financial statements December 31, 2018 and 2017

26. Transactions with related parties (cont'd)

		December 31, 2017								
			F	Rece	eivables			Payables		
		٦	Trade		Other		Trade	Other		
	Company name	rec	<u>eivables</u>	rec	ceivables	Total	payables	payables	T	otal
Subsidiary	SK Innovation Co., Ltd.	₩	15,456	₩	914	₩ 16,370	₩ -	₩ 8,836	₩	8,836
	SK Energy Co., Ltd.		6,042		-	6,042	-	4,097		4,097
	SK Global Chemical Co., Ltd.		2,404		-	2,404	-	1,870		1,870
	SK Incheon Petrochem Co., Ltd.		1,010		-	1,010	-	2,180		2,180
	SK Trading International Co., Ltd.		559		-	559	-	1,282		1,282
	SK Lubricants Co., Ltd.		1,166		-	1,166	-	1,876		1,876
	SK USA, Inc.		-		-	-	-	497		497
	SK Engineering & Construction Co., Ltd.		5,215		-	5,215	-	1		1
	SKC Co., Ltd.		2,193		-	2,193	-	11		11
	SK E&S Co., Ltd.		2,336		-	2,336	-	76		76
	SK Infosec Co., Ltd.		928		-	928	1,773	2,471		4,244
	SK C&C Beijing Co., Ltd.		120		-	120	477	201		678
	Essencore Limited		1,868		-	1,868	-	47		47
	SK Networks Co., Ltd.		6,624		72	6,696	45	395		440
	SK Telecom Co., Ltd.		85,708		348	86,056	688	8,547		9,235
	SK Telink Co., Ltd.		276		-	276	8	8		16
	SK Broadband Co., Ltd.		133,328		-	133,328	621	8,967		9,588
	PS&Marketing Corp.		617		-	617	-	-		-
	SK Planet Co., Ltd. (*2)		8,508		-	8,508	72	212		284
	SK Materials Co., Ltd.		1,538		-	1,538	-	232		232
	Others		5,988		4,666	10,654	448	988		1,436
Other related	Hana Land Chip PEF 33		-		5,983	5,983	-	-		-
parties	SK hynix Inc.		132,492		-	132,492	-	10,557		10,557
	SK hynix Semiconductor (China) Ltd.		1,843		-	1,843	-	-		-
	Happynarae Co., Ltd.		176		-	176	201	607		808
	Others		686		148	834	28	1,007		1,035
Others (*1)	SK Securities Co., Ltd.		2,923		-	2,923	-	-		-
	SK Gas Co., Ltd.		1,101		-	1,101	-	4		4
	SK Chemicals Co., Ltd.		1,530		-	1,530	-	-		-
	SK Shipping Co., Ltd.		225		-	225	-	-		-
	Others		470			470	72	130		202
		₩	423,330	₩	12,131	<u>₩435,461</u>	₩ 4,433	₩ 55,099	₩	59,532

- (*1) Although, not designated as related parties as defined in paragraph 9 of KIFRS 1024, the entity is designated as related parties based on the resolution made by the Securities and Futures Commission that conglomerate affiliates designated by the Fair Trade Commission are related parties based on the substance of relation as regulated by paragraph 10 of KIFRS 1024.
- (*2) SK Planet Co., Ltd. merged SK techx Co., Ltd. as at September 1, 2018. The transactions of SK techx Co., Ltd. are included in that of SK Planet Co., Ltd.

(4) Compensation for key management personnel of the Company for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

		For the years ended				
	Decembe	er 31, 2018	Decem	ber 31, 2017		
Salaries	\overline{W}	9,773	₩	5,339		
Provision for pension benefits		2,332		1,821		
Share compensation expense		1,586		1,220		
	\mathbb{W}	13,691	₩	8,380		

Key management consists of registered executives who are responsible for the planning, operation and control of the Company's business activities.

(5) Details of significant transactions with related parties in relation to the investments for the year ended December 31, 2018 are as follows (Korean won in millions, USD in thousands):

	Currency	Amount	Transactions
Alchemy Acquisition Corp.	USD	465,000	New acquisition
Plutus Capital NY, Inc.	USD	251,000	Share capital increase
Plutus Fashion NY, Inc.	USD	31,600	Share capital increase
SK Biopharmaceuticals Co., Ltd.	KRW	150,000	Share capital increase

During the current term, a comprehensive stock exchange took place in which about 1.26 million shares of SK Telecom Co., Ltd., which is owned by SK Telecom Co., Ltd., were transferred to SK Telecom Co., Ltd. in exchange for about 12.64 million shares of SK Infosec Co., Ltd., which is owned by the company.

(6) Guarantees provided to related parties are described in Note 29.

27. Discontinued operations

(1) Details of discontinued operations

In accordance with a resolution of the Board of Directors on November 17, 2017, the Company elected to sell Encar used car sales business, and the sale was completed on April 3, 2018. As at December 31, 2018, Encar used car sales business is classified as disposal groups and discontinued operations.

(2) Income and expenses from the discontinued operation for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For	the years ended December 31, 2018
		Encar used car sales business
Revenues (*1)	\mathbb{W}	321,401
Costs		281,262
Income before income tax expense		40,139
Income tax expenses		9,202
Gain from discontinued operations		30,937
	For	the years ended December 31, 2017 Encar used car sales business
Revenues	For ₩	
Revenues Costs		Encar used car sales business
		Encar used car sales business 931,416
Costs		Encar used car sales business 931,416 920,787

(*1) Income from disposal of discontinued operations of W71,825 million is included.

(3) Details of cash flows relating to discontinued operation for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the years end	ded December 31, 2018
	Encar used	car sales business
Cash flows from operating activities	\mathbf{W}	24,976
Cash flows from investing activities		187,661
Cash flows from financing activities		(16)

27. Discontinued operations (cont'd)

	For the years end	ded December 31, 2017	
	Encar used car sales business		
Cash flows from operating activities	\mathbf{W}	3,848	
Cash flows from investing activities		(10,968)	
Cash flows from financing activities		47	

28. Cash flow information

(1) Details of non-cash adjustments for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the ye	ars ended
	December 31, 2018	December 31, 2017
Provision for pension benefits	₩ 31,792	₩ 30,905
Depreciation	49,840	48,521
Depreciation of investment property	426	427
Amortization	16,035	13,337
Bad debt expenses	205	400
Provisions transferred in	4,559	13,951
Interest expenses	176,033	152,787
Loss on foreign currency translation	235	2,250
Loss on valuation of derivative instruments	240,668	6,102
Loss on disposal of available-for-sale financial asset	s -	158
Loss on impairment of available-for-sale financial as	sets -	90,790
Loss on valuation of financial assets measured at F\	/TPL 1,220	-
Loss on disposal of investments in subsidiaries and associates	6,536	4,009
Loss on impairment of investments in subsidiaries an associates	nd 3,417	-
Loss on disposal of property, plant and equipment	185	62
Loss on disposal of intangible assets	101	45
Loss on impairment of intangible assets	2,398	45
Share compensation expense	1,586	1,220
Income tax expense	167,786	41,744
Gain on disposal of discontinued operations	(71,825)	
Dividends income	(830,877)	
Interest income	(6,871)	· · · · · · · · · · · · · · · · · · ·
Gain on foreign currency translation	(138)	
Gain on valuation of derivative instruments	(178,280)	
Gain on valuation of financial assets measured	(36,586)	,
at FVTPL		
Gain on disposal of available-for-sale financial asset		(241)
Gain on disposal of investments in subsidiaries and associates	(671,817)	(38,791)
Gain on disposal of property, plant and equipment	(134,080)	(198)
Gain on disposal of intangible assets	(518)	· · · · ·
Others	48,909	405
	₩ (1,179,061)	₩ (334,001)

28. Cash flow information (cont'd)

(2) Details of working capital adjustments for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the years ended				
	Decem	nber 31, 2018	December 31,	2017	
Trade accounts receivable	\mathbb{W}	(27,896)	$ \mathbf{W} $	(785)	
Other accounts receivable		14		(1,567)	
Inventories		18,591	(2	26,204)	
Accrued income		287		166	
Advance payments		(9,531)		6,500	
Prepaid expenses		205		(3,639)	
Trade accounts payable		(9,172)	()	29,753)	
Advance received		(1,652)	:	36,325	
Withholdings		14,567		425	
Other accounts payable		(1,716)	2	22,864	
Accrued expenses		(29,677)		14,837	
Leasehold deposits received		(5,581)		(626)	
Provision for service warranties		(9,252)	(10,599)	
Retirement benefit obligation		(10,294)		(6,078)	
Plan assets		(34,532)	(2	20,822)	
Others		<u>(116</u>)		601	
	₩	(105,755)	₩ (<u>18,355</u>)	

(3) Details of significant non-cash transactions for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	For the years ended		
	December 31, 2018	December 31, 2017	
Transfer of investment instruments based on the changes in accounting policies	₩ 78,984	₩ -	
Transfer of long-term bonds payable to current-portion	1,083,032	1,050,132	
Accounts payable regarding the acquisition of property, plant and equipment and intangible assets	1,492	(8,656)	
Transfer of construction-in-progress to depreciable assets	25,654	4,156	
Transfer of available-for-sale financial assets to assets held for sale	-	36,813	
Transfer of investments in subsidiaries to assets held for sale	-	13,914	
Transfer of discontinued operations to assets held for sale	-	174,215	
Transfer of discontinued operations to liabilities held for sale	-	16,582	

(4) Details of changes in liabilities arising from financing activities for the year ended December 31, 2018 are as follows (Korean won in millions):

		For the year ended December 31, 2018						
		Beginning balance		Financial cash flow		Others		Ending balance
Short-term borrowings	₩	780,000	₩	130,000	₩	-	₩	910,000
Bonds payable		6,086,788		145,213		(14,300)		6,217,701
Unpaid dividends		155		(281,973)		281,972	_	154
	₩	6,866,943	₩	(6,760)	₩	267,672	₩	7,127,855

28. Cash flow information (cont'd)

		For the year ended December 31, 2017						
		Beginning		Financial				Ending
		balance	(cash flow		Others		balance
Short-term borrowings	\overline{W}	280,000	₩	500,000	₩	-	₩	780,000
Bonds payable		5,461,658		644,481		(19,351)		6,086,788
Unpaid dividends		156		(208,666)		208,665		155
	₩	5,741,814	₩	935,815	₩	189,314	₩	6,866,943

29. Commitments and contingencies

(1) Guarantees provided by financial institutions for the Company's obligations and indebtedness as at December 31, 2018 and 2017 are as follows (Korean won in millions, and USD and VND in thousands):

		Comm	itments	Use		
Financial institutions	Туре	Currency	Amount	Currency	Amount	
Industrial and comer- cial bank of China	General loan	KRW	100,000	KRW	60,000	
KEB Hana Bank	General loan	KRW	120,000	-	-	
	Credit bond loan	KRW	30,000	-	-	
	Bank overdraft	KRW	1,000	-	-	
	Other guarantee of foreign currency					
	management (*1) Guarantee of foreign	USD	19,000	USD	2,810	
	currency payment	VND	11,772,739	VND	11,772,739	
Shinhan Bank	General loan	KRW	300,000	KRW	200,000	
	Note discount Guarantee of foreign	KRW	90,000	-	-	
	currency payment	USD	2,000	-	-	
	Line of credit	USD	10,000	-	-	
NH Bank	General loan	KRW	65,000	-	-	
	Line of credit and Guarantee foreign currency payment	of USD	6,000	-	<u>-</u>	
Woori Bank Korea Development	General loan	KRW	270,000	KRW	150,000	
Bank	General loan	KRW	10,000	-	-	
Kookmin Bank	General loan	KRW	280,000	-	-	
Mitsubishi Bank	General loan	KRW	50,000	-	-	

(*1) The committed limit above is comprehensive limit.

(2) Guarantees provided by others for the Company's obligations and indebtedness as at December 31, 2018 and 2017 are as follows (Korean won in millions, and USD in thousands):

	Currency	December 31, 2018	December 31, 2017
Seoul Guarantee Insurance	KRW	1,071	2,477
Korea Software Financial Cooperative	KRW	244,882	238,871
The Export-Import Bank of Korea	USD	1,225	1,225
Korea Trade Insurance Corporation	USD	695	1,077

29. Commitments and contingencies (cont'd)

(3) Pending litigation

Details of significant pending litigations as at December 31, 2018 is as follows (Korean won in millions):

				Cla	aim	
	Plaintiff	Defendant	Description	ame	ount	Current status
Defendant	Korea Minting Security Printing & ID Card Operating Corp.	Company	Claim for damages	KRW	2,000	Second trial in progress

As at December 31, 2018, the Company is unable to determine the ultimate outcomes of the above litigations.

(4) Deposits restricted for the use as at December 31, 2018 and 2017 are as follows (Korean won in millions):.

	December 31, 2018	December 31, 2017	Reason for restriction
Short-term financial instruments	₩ 13,320	₩ 13,320	Refund guarantee and others
Long-term investment securities	2,215	2,152	Refund guarantee and others
(formerly, Available-for-sale			
financial assets)			
(Equity investment of Korea			
Software Financial Cooperation)			
Long-term financial instruments	19	19	Collateral for bank overdraft

(5) Significant commitments

- The Company, SK Innovation Co., Ltd., SK Energy Co., Ltd., SK Global Chemical Co., Ltd., SK Lubricants Co., Ltd., SK Incheon Petrochem Co., Ltd. and SK Trading International Co., Ltd., are collectively responsible for any obligations of the Company arising before the spin-off on July 1, 2007. The Company and SK Biopharmaceuticals Co., Ltd. are collectively responsible for any obligations of the Company that occurred before the spin-off on April 1, 2011.
- 2) The Company entered into a contract to lease the headquarters building from National Agricultural Cooperative Federation ("NACF"), the trustee of Hana Asset Management Co., Ltd. Under the terms of the lease, the lease period is until March 27, 2021, and the Company has the preemptive right to purchase the building at the fair value when the lessor elects to dispose the property.
- 3) The Company holds IT outsourcing and IT system maintenance agreements to provide hardware and information systems maintenance, and development service entered into between the Company and the affiliates of SK Group and others.
- 4) The Company entered into a contract with Gyeonggi province on May 31, 2011 to purchase land located in Pangyo Land Development District. The total agreement amount is ₩82,964 million (the Company's portion: ₩45,536 million (54.9%)), which will be used for the construction of urban infrastructure facilities ("designated purpose" of the land). The contract includes requirements to be complied with and restrictions in transfer of ownership of the land. Should there be non-compliance, the contract may be terminated or cancelled.

29. Commitments and contingencies (cont'd)

5) The Company entered into shareholder agreement regarding the issuance of ordinary shares of SK Shipping Co., Ltd., and sale of old shares. The details are as follows.

	Subscription of new shares	Sale of existing shares			
Investor	Special Situation 1 st Fund	Corporate Turnaround 1st Fund			
Number of shares	6,548,672	4,808,259			
Contract date	April 11, 2017	May 11, 2017			
Expiry date	April 10, 2022	May 10, 2022			
Settlement	The Company and the investors settle the amount that deducts the issue price from the net selling price in cash. If the amount is positive, the investor shal pay to the Company, and if the amount is negative, the Company shall pay to the investor. In case where the sale is not complete, the selling price of the shares is considered to be 0.				
Premium	The Company shall pay to the investors the amount equivalent to 3.14% of the total shares held by investors annually. When the investor receives dividends on the shares held, the amount shall be paid to the Company.				
Call option	The Company has the right to purch	ase the shares held by the investors at s with certain level of additional charges.			

6) The Company entered into shareholder agreement with ordinary share investors of SK Siltron Co., Ltd., one of the subsidiaries. The details are as follows.

	Shareholder agreement
Investor	Warmachine Sixth Co., Ltd. and others
Number of shares	13,140,440
Contract date	August 25, 2017
Expiry date	August 24, 2022
Settlement	The Company and the investors settle the amount that deducts the issue price from the net selling price in cash. If the amount is positive, the investor shall pay to the Company, and if the amount is negative, the Company shall pay to the investor. In case where the sale is not complete, the selling price of the shares is considered to be 0.
Premium	The Company shall pay 0.5% of the initial contract amount on the closing date of the transaction and shall pay to the investors the amount equivalent to 3.20% of the total shares held by investors annually. When the investor receives dividends on the shares held, the amount shall be paid to the Company.
Call option	On a three-month basis from the closing date of sale ("the quarterly payment day"), the Company has the right to purchase the shares held by the investors at the initial contract price of the ordinary shares with certain level of additional charges.

29. Commitments and contingencies (cont'd)

7) The Company entered into shareholder agreement with ordinary share investors of SK E&S Co., Ltd., one of the subsidiaries. The details are as follows.

	Shareholder agreement
Investor	MD Prime 1st Co., Ltd. and others
Number of shares	4,640,199
Contract date	November 14, 2017
Expiry date	November 13, 2022
Settlement	The Company and the investors settle the amount that deducts the issue price from the net selling price in cash. If the amount is positive, the investor shall pay to the Company, and if the amount is negative, the Company shall pay to the investor. In case where the sale is not complete, the selling price of the shares is considered to be 0.
Premium	The Company shall pay to the investors the amount equivalent to 3.07% of the total shares held by investors annually. When the investor receives dividends on the shares held, the amount shall be paid to the Company.
Call option	On the premium payment date and on a three-month basis between the date on which the resolution is made by the Board of Directors with regards to designation of IPO supervisor and the submission date of demand of preliminary assessment for listing ("the quarterly payment day"), the Company has the right to purchase the shares held by the investors at the initial contract price of the ordinary shares with certain level of additional charges.

- 8) The Company entered into a cash deficiency support agreement with Hudson Energy NY, LLC, a subsidiary of Plutus Capital NY, Inc., to lend funds for the shortfall of payment for loans and credit limit of USD 226,000 thousand.
- 9) SK E&S LNG, LLC, one of the subsidiaries, is scheduled to be provided with liquefaction service amounting to 115 million MMBtu per year for 20 years from FLNG Liquefaction 3, LLC, Which plans to operate natural gas liquefaction plants in Texas starting from 2019. As at December 31, 2018, SK E&S Co., Ltd., one of the subsidiaries, is responsible for performance guarantee in case of SK E&S LNG, LLC's inability to make payments for service or for claims against breach of obligation. In regard to this, the Company provides performance guarantee for SK E&S Co., Ltd.'s guarantee.
- 10) The Company provided performance guarantee to SK Shipping Co., Ltd.. Amount of guarantee provided to SK Shipping Co., Ltd. by the Company was ₩36,231 million, and contingent liabilities less the estimated value of ships owned by SK Shipping Co., Ltd. was ₩0.
- 11) The Company entered into a cash deficiency support agreement with Abrasax Investment Inc., a subsidiary of Alchemy Acquisition Corp., which was included in the consolidation as at August 8, 2018, to lend funds for the shortfall of payment for loans and credit of up to USD 315,000 thousand.
- (7) The Company has provided 7 blank checks and 12 blank notes as collateral in relation to sales and other transactions as at December 31, 2018.

30. Financial risk management

The principal financial liabilities of the Company comprise borrowings, bonds payable, trade and other accounts payable. The main purpose of these financial liabilities is to finance the operations of the Company. Further, the Company has various financial assets, including trade and other accounts receivable that are directly related to its operations. The Company's financial assets and liabilities are exposed to mainly market risk, credit risk and liquidity risk. The Company's key management is responsible for the Company's financial risk-taking activities, and that such activities are governed by appropriate policies and procedures.

30.1 Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risks comprise three types of risk: interest rate, foreign currency and other price.

30.1.1 Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Company manages its interest rate risk by having a balanced portfolio of fixed and variable rate loans and borrowings, The Company's risk hedging activities are evaluated periodically in order to consider the status of interest rates and degree of risk aversion and fulfill optimal risk hedging strategies. The Company does not believe the fluctuation in market interest rate other than those mentioned above has a material impact on its financial statements.

30.1.2 Foreign currency risk

Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The exposure to the risk of changes in foreign exchange rates relates primarily to selling and purchasing. The Company manages its foreign currency risk periodically.

Significant monetary assets and liabilities denominated in foreign currencies as at December 31, 2018 and 2017 are as follows (Korean won in millions, and USD, EUR and Others in thousands):

		December 31, 2018		2018	December	· 31, 20	31, 2017	
		Foreign	Kc	orea won	Foreign	Ko	rea won	
	Currency	currencies	ec	uivalent	currencies	eq	uivalent	
Assets	USD	11,114	₩	12,450	9,374	₩	10,044	
	EUR	1,326		1,695	707		904	
	Others			8,650			2,009	
			₩	22,795		₩	12,957	
Liabilities	USD	2,546	₩	2,994	4,226	₩	4,528	
	EUR	9		11	-		-	
	Others			<u>956</u>			1,157	
			₩	3,961		₩	5,685	

Should the exchange rate of the aforementioned currencies fluctuate by 10%, the effects on income before income tax expense would be as follows (Korean won in millions):

	For the years ended							
		December 31, 2018			December 31, 2017			2017
	Inc	Increase by Decrease by		Inci	rease by	De	crease by	
		10%		10%		10%		10%
Increase (decrease) in income before tax expense	₩	1,883	₩	(1,883)	₩	727	₩	(727)

30.1.3 Other price risk

Other price risk is the risk that the fair value or future cash flows of financial instruments will fluctuate because of changes in market prices other than from interest rate risk and foreign currency risk. The Company has not determined that the effect of changes in other price would have materially affected the Company.

30.2 Credit risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Company's receivables from customers and investment securities.

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk as at December 31, 2018 and 2017 is as follows and for cash and cash equivalents, credit risk exposure is low (Korean won in millions):

	Decer	<u>mber 31, 2018</u>	Decen	nber 31, 2017
Short-term and long-term financial instruments	₩	128,510	₩	43,534
Trade accounts receivable		354,128		399,748
Other accounts receivable		1,858		1,767
Accrued income		118		112
Long-term investment securities		162,869		-
Available-for-sale financial assets		-		13,486
Short-term and long-term guarantee deposits		21,186		10,830
Short-term and long-term loan		397		397
	\overline{W}	669,066	₩	469,874

30.2.1 Trade and other accounts receivable

Customer credit risk is managed by each business unit subject to the Company's established policies, procedures and control related to customer credit risk management. Credit quality of the customer is assessed based on an extensive credit rating scorecard and individual credit limits are defined in accordance with this assessment. Outstanding customer receivables are regularly monitored and any shipments to major customers are generally covered by letters of credit or other forms of credit insurance.

Maximum exposure to credit risk at the reporting date is the book value of each class of financial assets. The Company apply a simple method that recognizes lifetime expected credit losses as a provision for losses on account receivables and other receivables. To measure expected credit losses, trade receivables and contract assets were separated by credit risk characteristics and past due dates.

As at December 31, 2018 and 2017, the aging of trade receivables and others for which an allowance for doubtful accounts has not been made, as the allowance is deemed to be recoverable from a customer or counterparty later although the amount is past due, are as follows (Korean won in millions):

	December 31, 2018				December 31, 2017			
	Trade accounts receivable			Other receivables	Tı	Trade accounts receivable		Other ceivables
Less than one month	₩	2,359	₩	-	₩	2,905	₩	2,011
One-three months		2,009		-		638		48
Three-six months		18		-		1,952		3
More than six months		3,506		207		7,189		332
	₩	7,892	₩	207	₩	12,684	₩	2,394

30.2.2 Trade and other accounts receivable (cont'd)

Changes in the allowance for doubtful accounts for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

		For the years ended				
	Decem	ber 31, 2018	Decem	ber 31, 2017		
Beginning balance	₩	2,956	\mathbb{W}	4,389		
Bad debt expenses		169		400		
Write-off		(149)		(138)		
Assets held for sale (*1)				(1,695)		
Ending balance	₩	2,976	₩	2,956		

(*1) It is the amount transferred to assets held for sale during the previous reporting period.

30.2.3 Other financial assets

Credit risk arising from other financial assets consists of long-term and short-term financial instruments, occurrence of trade opponent arising from the bankruptcy, etc. In this case, the credit risk exposure of the Company will be the same as the book value of the maximum applicable financial instruments. On the other hand, the management of the Company's credit rating, because it is excellent to deal with financial institutions, is judged to have limited impact on the credit risk of the financial institutions of the Company.

30.3 Liquidity risk

Liquidity risk refers to the risk that the Company may default on the contractual obligations that become due. The Company manages its risk to a shortage of funds using a recurring liquidity planning tool.

The contractual maturity of financial liabilities as at December 31, 2018 is as follows. Amounts include interests paid and presented at gross amounts (Korean won in millions):

	Book value	Contractual cash flow	Less than 3 months	3-12 months	1-5 years	More than 5 years
Short-term borrowings	₩ 910,000	₩ 913,792	₩ 613,792	₩ 300,000	₩ -	₩ -
Bonds payable	6,217,701	6,669,579	286,091	923,954	4,359,597	1,099,937
Financial derivatives liabilities	240,315	240,315	78	68	240,169	-
Trade accounts payable	116,507	116,507	116,507	-	-	-
Other liabilities	172,579	172,579	138,121	28,248	6,210	
	₩ 7,657,102	₩ 8,112,772	<u>₩ 1,154,589</u>	₩ 1,252,270	₩ 4,605,976	₩ 1,099,937

30.4 Capital management

The fundamental goal of capital risk management is to maintain a solid financial structure. In addition, as the Company is a holding company, it should maintain a debt ratio of less than 200% under Article 8 of Monopoly Regulations and Fair Trade Law. The debt ratio is calculated as total liabilities divided by total equity.

The Company maintains a debt ratio of 62.34% as at December 31, 2018. The maturity of the debt is dispersed in the long-term and the borrowings mainly consist of long-term bonds, which do not present significant risks for unexpected payment for debts.

The Company's debt ratio as at December 31, 2018 and 2017 is as follows (Korean won in millions):

	December 31, 2018	
Total liabilities	₩ 8,208,532	₩ 7,626,360
Total equity	13,168,136	12,332,701
Debt ratio	62.34%	61.84%

31. Business combination

(1) Details of significant information related to merger for the year ended December 31, 2018 are as follows:

	Details
Existing company after the acquisition	SK Holdings Co., Ltd.
Extinct company after the acquisition	SK Maritime Co., Ltd.
Effective date	March 1, 2018
Registration date	March 5, 2018
Purpose	Management efficiency
Ratio of acquisition	Ordinary shares of SK Holdings Co., Ltd.: ordinary shares of SK Maritime Co., Ltd. = 1:0.0000000

(2) Details of adjustments related to merger for the year ended December 31, 2018 are as follows (Korean won in millions):

	Amount		
Consideration transferred:	\mathbf{W}	332,400	
Identifiable assets and liabilities:			
Current assets		101	
Cash and cash equivalents		4	
Other accounts receivable		97	
Non-current assets		21,696	
Long-term investment securities		37	
Investments in subsidiaries		21,659	
Net assets		21,797	
Capital surplus:		310,603	

32. Subsequent events

32.1 Equity investment in SK South East Asia Investment Pte. Ltd.

The Company have decided to increase additional capital to SK South East Asia Investment Pte. Ltd. The estimated investment amount is USD 100 million, and the capital increase will take place in 2019

Independent auditors' review report on internal control over financial reporting

Chief Executive Officer SK Holdings Co., Ltd.

We have reviewed the accompanying management's report on the operations of the internal control over financial reporting ("ICFR") of SK Holdings Co., Ltd. (the "Company") as at December 31, 2018. The Company's management is responsible for the design and operations of its ICFR, including the reporting of its operations. Our responsibility is to review management's ICFR report and issue a report based on our review. Management's report on the operations of the ICFR of the Company states that "based on the assessment of the operations of the ICFR, the Company's ICFR has been effectively designed and has operated as at December 31, 2018 in all material respects, in accordance with the ICFR standard."

We conducted our review in accordance with the ICFR review standards established by the Korean Institute of Certified Public Accountants. These standards require that we plan and perform our review to obtain less assurance than an audit as to management's report on the operations of the ICFR. A review includes the procedures of obtaining an understanding of the ICFR, inquiring as to management's report on the operations of the ICFR and performing a review of related documentation within limited scope, if necessary.

A company's ICFR consists of an establishment of related policies and organization to ensure that it is designed to provide reasonable assurance on the reliability of financial reporting and the preparation of financial statements for external financial reporting purposes in accordance with KIFRS. However, because of its inherent limitations, the ICFR may not prevent or detect material misstatements of the financial statements. Also, projections of any assessment of the ICFR on future periods are subject to the risk that ICFR may become inadequate due to the changes in conditions, or that the degree of compliance with the policies or procedures may be significantly reduced.

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

We conducted our review of the ICFR in existence as at December 31, 2018 and we did not review the ICFR subsequent to December 31, 2018. This report has been prepared for Korean regulatory purposes pursuant to the External Audit Law, and may not be appropriate for other purposes or for other users.

Const Joung Han Joung

March 12, 2019

This report is annexed in relation to the audit of the separate financial statements as at December 31, 2018 and the review of internal control over financial reporting pursuant to Article 2-3 of the Act on External Audit of Stock Companies of the Republic of Korea.

Report on the Operations of Internal Accounting Control System

March 5, 2019

To the Shareholders, Board of Directors, and Audit Committee of SK Holdings Co., Ltd.

We, as the Chief Executive Officer and the Internal Accounting Control Officer of SK Holdings Co., Ltd. ("the Company"), assessed operating status of the Company's Internal Accounting Control System ("IACS") for the year ending December 31, 2018.

Design and operation of IACS is the responsibility of the Company's management, including the Chief Executive Officer and the Internal Accounting Control Officer.

We evaluated whether the Company effectively designed and operated its IACS to prevent and detect errors or frauds which may cause a misstatement in financial statements to ensure preparation and disclosure of reliable financial information. We applied the IACS Framework for the assessment design and operations of the IACS.

Based on our assessment, we concluded that the Company's IACS is designed and operated effectively as of December 31, 2018, in all material respects, in accordance with the IACS Framework issued by the Accounting Control System Operation Committee.

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

2.21

President & Chief Executive Officer Dong Hyun, Jang