



# **SK Holdings Co., Ltd. and its subsidiaries**

Consolidated financial statements  
for the years ended December 31, 2019 and 2018  
with the independent auditor's report

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## Independent auditor's report

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

#### Opinion

We have audited the consolidated financial statements of SK Holdings Co., Ltd. (the "Company") and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as of December 31, 2019 and 2018, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2019 and 2018, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("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 consolidated financial statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Key audit matters

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

##### (1) Revenue recognition by input method

As discussed in Note 2 to the consolidated financial statements, if the Group can reasonably measure the percentage of completion of the performance obligation for construction contracts and system construction services and others, the contract revenue related to the performance obligation is recognized as revenue based on the percentage of completion of the contract activity as of the end of the reporting period. The Group measures the percentage of completion based on the ratio of total costs incurred for the performance obligation divided by the total estimated contract costs, and such measurement method involves 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 percentage of completion or the likelihood of errors in profit or loss due to an intentional misstatement.

The major audit procedures we have performed in this regard were as follows:

- Obtained an understanding of the Group's accounting policies related to revenue recognition and reviewed whether there were any modifications to the accounting policies
- Reviewed whether the conditions that can reasonably measure the percentage of completion are met
- Obtained an understanding of the design of internal controls related to estimation and modification to total estimated contract costs and evaluated such design
- Recalculated the percentage of completion and reviewed contracts with significant changes in the percentage of completion
- Reviewed the occurrence and timing of input costs incurred during the current period through sampling

## (2) Impairment testing of goodwill and intangible assets with indefinite useful life

As described in Note 14 and 15 to the consolidated financial statements, through a number of business combinations in the past, the Group has recognized goodwill of ₩2,598,464 million and intangible assets with indefinite useful life (brand-related assets) of ₩2,596,643 million as of December 31, 2019.

As of December 31, 2019, of the total goodwill and intangible assets recognized by the Group, SK brand-related assets of ₩1,975,000 million from merger with the Company in 2015 and goodwill of ₩1,155,037 million from the acquisition of 740,895 shares (55%) of Life & Security Holdings Co., Ltd. in 2018 were significant in amount. In accordance with KIFRS 1036 *Impairment of Assets*, the Group shall test goodwill acquired in a business combination and intangible assets with indefinite useful life for impairment annually. In consideration of the significance of management's assumptions and judgment used in estimating value in use related to impairment testing of goodwill and intangible assets with indefinite useful life, we determined impairment testing of goodwill related to the acquisition of Life & Security Co., Ltd. and SK brand-related assets as a key audit matter.

The major audit procedures we have performed in this regard were as follows:

- Obtained an understanding of assets subject to impairment testing and reviewed the Group's accounting policies related to impairment testing
- Assessed the qualification, experience and expertise of the Group's external valuers and checked their objectivity and independence
- Reviewed the impairment report prepared by the Group's external valuers
- Involved an internal specialist and reviewed the appropriateness of the valuation method and assumptions used
- Compared the financial forecasts used in estimating value in use and those approved by management
- Reviewed the impact on management's result of assessment due to changes in key assumptions from sensitivity analysis of discount rates and permanent growth rates that are used in estimating value in use
- Reviewed adequacy and completeness of the related disclosures in accordance with KIFRS 1036

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

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

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

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

### **Auditor's responsibilities for the audit of the consolidated financial statements**

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

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

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other 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 consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter 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 engagement partner on the audit resulting in this independent auditor's report is Yong-Soo Jung.



March 10, 2020

This audit report is effective as of March 10, 2020, 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 consolidated financial statements and may result in modifications to this report.

# **SK Holdings Co., Ltd. and its subsidiaries**

Consolidated financial statements  
for the years ended December 31, 2019 and 2018

“The accompanying consolidated financial statements, including all footnotes and disclosures,  
have been prepared by, and are the responsibility of, the Group.”

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

**SK Holdings Co., Ltd. and its subsidiaries**  
**Consolidated statements of financial position**  
**as of December 31, 2019 and 2018**

(Korean won in millions and U.S. dollar in thousands)

	Notes	Korean won		Translation into U.S. dollar (Note 2)	
		2019	2018	2019	2018
<b>Assets</b>					
Current assets:					
Cash and cash equivalents	6,35,37,38	₩ 7,981,755	₩ 6,783,035	\$ 6,893,898	\$ 5,858,555
Short-term financial instruments	6,35,37	3,694,344	4,218,107	3,190,831	3,643,209
Trade receivables, net	6,7,35,38	10,377,328	10,844,124	8,962,971	9,366,146
Other receivables, net	6,38	1,912,498	1,932,335	1,651,838	1,668,971
Inventories, net	8,38	9,138,361	8,992,740	7,892,867	7,767,093
Short-term investment securities	6,9,35,38	185,101	197,717	159,873	170,770
Other current assets	6,20,21,32,35,37,38	4,431,557	3,872,992	3,827,566	3,345,130
Assets held for sale	31	2,308,204	287,347	1,993,612	248,184
<b>Total current assets</b>		<b>40,029,148</b>	<b>37,128,397</b>	<b>34,573,456</b>	<b>32,068,058</b>
Non-current assets:					
Long-term financial instruments	6,35,37	7,598	12,549	6,562	10,839
Long-term trade receivables, net	6,7,38	130,171	11,373	112,430	9,823
Long-term other receivables, net	6,38	354,622	313,213	306,290	270,524
Long-term investment securities	6,9,35,38	2,810,412	2,217,401	2,427,373	1,915,185
Investments in associates and joint ventures	10,35	21,894,716	19,218,345	18,910,620	16,599,020
Property, plant and equipment, net	11,32,35	42,846,379	39,715,921	37,006,719	34,302,920
Right-of-use assets, net	12	4,543,546	-	3,924,293	-
Investment properties, net	13,35	487,758	503,966	421,280	435,279
Goodwill	14	2,598,464	2,379,526	2,244,312	2,055,213
Intangible assets, net	15	12,067,786	13,811,199	10,423,032	11,928,830
Deferred tax assets	27	798,454	694,690	689,630	600,009
Other non-current assets	6,19,20,21,32,37,38	3,451,622	3,450,411	2,981,189	2,980,144
<b>Total non-current assets</b>		<b>91,991,528</b>	<b>82,328,594</b>	<b>79,453,730</b>	<b>71,107,785</b>
<b>Total assets</b>		<b>₩ 132,020,676</b>	<b>₩ 119,456,991</b>	<b>\$ 114,027,186</b>	<b>\$ 103,175,843</b>
<b>Liabilities and equity</b>					
<b>Liabilities</b>					
Current liabilities:					
Short-term borrowings	6,7,16,33,35,38	₩ 5,888,357	₩ 3,426,330	\$ 5,085,815	\$ 2,959,345
Trade payables	6,38	8,809,856	9,028,488	7,609,135	7,797,969
Other payables	6,17,38	3,961,150	3,468,375	3,421,273	2,995,660
Provisions	18	584,093	352,225	504,485	304,219
Current portion of long-term debt	6,16,33,34,35,38	6,029,722	5,024,863	5,207,913	4,340,010
Other current liabilities	6,20,21,32,38	10,032,433	8,603,819	8,665,083	7,431,179
Liabilities held for sale	31	257,526	103,732	222,427	89,594
<b>Total current liabilities</b>		<b>35,563,137</b>	<b>30,007,832</b>	<b>30,716,131</b>	<b>25,917,976</b>
Non-current liabilities:					
Bonds payable and long-term borrowings	6,16,33,35,38	32,374,161	28,890,533	27,961,790	24,952,956
Long-term trade payables	6,38	2,391	-	2,065	-
Long-term other payables	6,17,33,34,38	1,565,043	2,011,424	1,351,739	1,737,281
Defined benefit liabilities	19	414,682	420,227	358,164	362,953
Provisions	18	210,606	276,937	181,902	239,192
Deferred tax liabilities	27	5,493,581	5,491,052	4,744,845	4,742,660
Other non-current liabilities	6,20,21,32,38	4,214,440	1,471,114	3,640,042	1,270,613
<b>Total non-current liabilities</b>		<b>44,274,904</b>	<b>38,561,287</b>	<b>38,240,547</b>	<b>33,305,655</b>
<b>Total liabilities</b>		<b>79,838,041</b>	<b>68,569,119</b>	<b>68,956,678</b>	<b>59,223,631</b>
<b>Equity</b>					
Equity attributable to owners of the parent:					
Issued capital	1,22	15,385	15,385	13,288	13,288
Other paid-in capital	22	4,074,176	4,631,955	3,518,894	4,000,652
Retained earnings	22	12,558,584	12,217,319	10,846,937	10,552,184
Other components of equity	22	37,624	(237,143)	32,496	(204,822)
<b>Total equity attributable to owners of the parent</b>		<b>16,685,769</b>	<b>16,627,516</b>	<b>14,411,615</b>	<b>14,361,302</b>
Non-controlling interests		35,496,866	34,260,356	30,658,893	29,590,910
<b>Total equity</b>		<b>52,182,635</b>	<b>50,887,872</b>	<b>45,070,508</b>	<b>43,952,212</b>
<b>Total liabilities and equity</b>		<b>₩ 132,020,676</b>	<b>₩ 119,456,991</b>	<b>\$ 114,027,186</b>	<b>\$ 103,175,843</b>

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

**SK Holdings Co., Ltd. and its subsidiaries**  
**Consolidated statements of comprehensive income**  
**for the years ended December 31, 2019 and 2018**

(Korean won in millions and U.S. dollar in thousands, except for earnings per share)

	Notes	Korean won		Translation into U.S. dollar (Note 2)	
		2019	2018	2019	2018
<b>Sales</b>	4	₩ 99,264,574	₩ 100,161,648	\$ 85,735,510	\$ 86,510,320
<b>Cost of sales</b>	26	90,206,178	90,673,349	77,911,710	78,315,209
<b>Gross profit</b>		<b>9,058,396</b>	<b>9,488,299</b>	<b>7,823,800</b>	<b>8,195,111</b>
Selling and administrative expenses	23,26	5,108,532	4,804,505	4,412,275	4,149,685
<b>Operating profit</b>	4	<b>3,949,864</b>	<b>4,683,794</b>	<b>3,411,525</b>	<b>4,045,426</b>
Finance income	6,24	3,419,183	3,922,361	2,953,172	3,387,771
Finance costs	6,24	4,794,438	4,505,884	4,140,990	3,891,764
Share of profit of associates and joint ventures, net	10	595,981	3,665,477	514,753	3,165,898
Other non-operating income	6,25	877,093	736,150	757,551	635,818
Other non-operating expenses	6,25	1,271,115	943,756	1,097,870	815,129
<b>Profit from continuing operations before income tax expense</b>	4	<b>2,776,568</b>	<b>7,558,142</b>	<b>2,398,141</b>	<b>6,528,020</b>
<b>Income tax expense from continuing operations</b>	27	<b>1,075,631</b>	<b>1,931,757</b>	<b>929,030</b>	<b>1,668,472</b>
<b>Profit for the year from continuing operations</b>	4	<b>1,700,937</b>	<b>5,626,385</b>	<b>1,469,111</b>	<b>4,859,548</b>
<b>Gain (loss) from discontinued operations</b>	30	<b>(93,688)</b>	<b>524,756</b>	<b>(80,919)</b>	<b>453,235</b>
<b>Profit for the year</b>		<b>₩ 1,607,249</b>	<b>₩ 6,151,141</b>	<b>\$ 1,388,192</b>	<b>\$ 5,312,783</b>
attributable to:					
Owners of the parent		717,270	2,253,123	619,511	1,946,038
Non-controlling interests		889,979	3,898,018	768,681	3,366,745
<b>Other comprehensive income (loss):</b>					
Items not to be reclassified to profit or loss in subsequent periods (net of tax):					
Remeasurement loss on defined benefit plans		(138,963)	(137,019)	(120,023)	(118,344)
Net loss on valuation of financial assets measured at FVOCI		(72,991)	(152,281)	(63,043)	(131,526)
Items to be reclassified to profit or loss in subsequent periods (net of tax):					
Equity adjustments of investments in associates and joint ventures		126,537	51,283	109,291	44,293
Net gain on valuation of derivative instruments		15,077	35,134	13,022	30,345
Net gain on translation of foreign operations		350,851	146,709	303,032	126,714
Net loss on translation of presentation currency		-	(64,671)	-	(55,857)
		280,511	(120,845)	242,279	(104,375)
<b>Total comprehensive income for the year</b>		<b>₩ 1,887,760</b>	<b>₩ 6,030,296</b>	<b>\$ 1,630,471</b>	<b>\$ 5,208,408</b>
attributable to:					
Owners of the parent		927,303	2,300,054	800,918	1,986,573
Non-controlling interests		960,457	3,730,242	829,553	3,221,835
<b>Earnings per share (Korean won and U.S. dollar):</b>	28				
Basic earnings per share		₩ 12,917	₩ 40,310	\$ 11	\$ 35
Basic earnings per share from continuing operations		13,601	33,596	12	29

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



SK Holdings Co., Ltd. and its subsidiaries  
Consolidated statements of changes in equity  
for the years ended December 31, 2019 and 2018  
(Korean won in millions)

	Issued capital	Other paid-in capital	Retained earnings	Other components of equity	Total equity attributable to owners of the parent	Non-controlling interests	Total equity
<b>As of January 1, 2018</b>	₩ 15,385	₩ 4,112,475	₩ 9,837,619	₩ (305,397)	₩ 13,660,082	₩ 32,096,338	₩ 45,756,420
<b>Effect of changes in accounting policies</b>	-	-	485,878	(42,236)	443,642	1,265,791	1,709,433
<b>As of January 1, 2018 (Restated)</b>	₩ 15,385	₩ 4,112,475	₩ 10,323,497	₩ (347,633)	₩ 14,103,724	₩ 33,362,129	₩ 47,465,853
Total comprehensive income:							
Profit for the year	-	-	2,253,123	-	2,253,123	3,898,018	6,151,141
Remeasurement loss on defined benefit plans	-	-	(63,559)	-	(63,559)	(73,460)	(137,019)
Net loss on valuation of financial assets measured at FVOCI	-	-	-	(40,948)	(40,948)	(111,333)	(152,281)
Equity adjustments of investments in associates and joint ventures	-	-	-	67,515	67,515	(16,232)	51,283
Net gain on valuation of derivative instruments	-	-	-	18,508	18,508	16,626	35,134
Net gain on translation of foreign operations	-	-	-	75,815	75,815	70,894	146,709
Net loss on translation of presentation currency	-	-	-	(10,400)	(10,400)	(54,271)	(64,671)
Transaction with shareholders:							
Dividends	-	-	(281,971)	-	(281,971)	(1,229,101)	(1,511,072)
Equity transactions within consolidated entities	-	518,418	-	-	518,418	(1,230,442)	(712,024)
Changes in the scope of consolidation	-	-	-	-	-	(375,782)	(375,782)
Others	-	1,062	(13,771)	-	(12,709)	3,310	(9,399)
<b>As of December 31, 2018</b>	₩ 15,385	₩ 4,631,955	₩ 12,217,319	₩ (237,143)	₩ 16,627,516	₩ 34,260,356	₩ 50,887,872
<b>As of January 1, 2019</b>	₩ 15,385	₩ 4,631,955	₩ 12,217,319	₩ (237,143)	₩ 16,627,516	₩ 34,260,356	₩ 50,887,872
<b>Effect of changes in accounting policies</b>	-	-	(1,226)	-	(1,226)	(16,195)	(17,421)
<b>As of January 1, 2019 (Restated)</b>	₩ 15,385	₩ 4,631,955	₩ 12,216,093	₩ (237,143)	₩ 16,626,290	₩ 34,244,161	₩ 50,870,451
Total comprehensive income:							
Profit for the year	-	-	717,270	-	717,270	889,979	1,607,249
Remeasurement loss on defined benefit plans	-	-	(64,734)	-	(64,734)	(74,229)	(138,963)
Net loss on valuation of financial assets measured at FVOCI	-	-	-	(26,829)	(26,829)	(46,162)	(72,991)
Equity adjustments of investments in associates and joint ventures	-	-	-	94,677	94,677	31,860	126,537
Net gain (loss) on valuation of derivative instruments	-	-	-	(4,809)	(4,809)	19,886	15,077
Net gain on translation of foreign operations	-	-	-	211,728	211,728	139,123	350,851
Transaction with shareholders:							
Dividends	-	-	(281,972)	-	(281,972)	(1,531,765)	(1,813,737)
Acquisition of treasury shares	-	(907,549)	-	-	(907,549)	-	(907,549)
Equity transactions within consolidated entities	-	351,467	(15,975)	-	335,492	1,707,281	2,042,773
Changes in the scope of consolidation	-	-	-	-	-	106,922	106,922
Others	-	(1,697)	(12,098)	-	(13,795)	9,810	(3,985)
<b>As of December 31, 2019</b>	₩ 15,385	₩ 4,074,176	₩ 12,558,584	₩ 37,624	₩ 16,685,769	₩ 35,496,866	₩ 52,182,635

(Continued)

SK Holdings Co., Ltd. and its subsidiaries  
Consolidated statements of changes in equity  
for the years ended December 31, 2019 and 2018 (cont'd)  
(U.S. dollar in thousands)

	Issued capital	Other paid-in capital	Retained earnings	Other components of equity	Total equity attributable to owners of the parent	Non-controlling interests	Total equity
<b>As of January 1, 2018</b>	\$ 13,288	\$ 3,551,974	\$ 8,496,821	\$ (263,774)	\$ 11,798,309	\$ 27,721,833	\$ 39,520,142
<b>Effect of changes in accounting policies</b>	-	-	419,656	(36,480)	383,176	1,093,273	1,476,449
<b>As of January 1, 2018 (Restated)</b>	\$ 13,288	\$ 3,551,974	\$ 8,916,477	\$ (300,254)	\$ 12,181,485	\$ 28,815,106	\$ 40,996,591
Total comprehensive income:							
Profit for the year	-	-	1,946,038	-	1,946,038	3,366,745	5,312,783
Remeasurement loss on defined benefit plans	-	-	(54,896)	-	(54,896)	(63,448)	(118,344)
Net loss on valuation of financial assets measured at FVOCI	-	-	-	(35,367)	(35,367)	(96,159)	(131,526)
Equity adjustments of investments in associates and joint ventures	-	-	-	58,313	58,313	(14,020)	44,293
Net gain on valuation of derivative instruments	-	-	-	15,985	15,985	14,360	30,345
Net gain on translation of foreign operations	-	-	-	65,482	65,482	61,232	126,714
Net loss on translation of presentation currency	-	-	-	(8,981)	(8,981)	(46,876)	(55,857)
Transaction with shareholders:							
Dividends	-	-	(243,540)	-	(243,540)	(1,061,583)	(1,305,123)
Equity transactions within consolidated entities	-	447,761	-	-	447,761	(1,062,741)	(614,980)
Changes in the scope of consolidation	-	-	-	-	-	(324,566)	(324,566)
Others	-	917	(11,895)	-	(10,978)	2,860	(8,118)
<b>As of December 31, 2018</b>	\$ 13,288	\$ 4,000,652	\$ 10,552,184	\$ (204,822)	\$ 14,361,302	\$ 29,590,910	\$ 43,952,212
<b>As of January 1, 2019</b>	\$ 13,288	\$ 4,000,652	\$ 10,552,184	\$ (204,822)	\$ 14,361,302	\$ 29,590,910	\$ 43,952,212
<b>Effect of changes in accounting policies</b>	-	-	(1,059)	-	(1,059)	(13,988)	(15,047)
<b>As of January 1, 2019 (Restated)</b>	\$ 13,288	\$ 4,000,652	\$ 10,551,125	\$ (204,822)	\$ 14,360,243	\$ 29,576,922	\$ 43,937,165
Total comprehensive income:							
Profit for the year	-	-	619,511	-	619,511	768,681	1,388,192
Remeasurement loss on defined benefit plans	-	-	(55,911)	-	(55,911)	(64,112)	(120,023)
Net loss on valuation of financial instruments measured at FVOCI	-	-	-	(23,172)	(23,172)	(39,871)	(63,043)
Equity adjustments of investments in associates and joint ventures	-	-	-	81,773	81,773	27,518	109,291
Net gain (loss) on valuation of derivative instruments	-	-	-	(4,154)	(4,154)	17,176	13,022
Net gain on translation of foreign operations	-	-	-	182,871	182,871	120,161	303,032
Transaction with shareholders:							
Dividends	-	-	(243,541)	-	(243,541)	(1,322,996)	(1,566,537)
Acquisition of treasury shares	-	(783,856)	-	-	(783,856)	-	(783,856)
Equity transactions within consolidated entities	-	303,565	(13,798)	-	289,767	1,474,591	1,764,358
Changes in the scope of consolidation	-	-	-	-	-	92,349	92,349
Others	-	(1,467)	(10,449)	-	(11,916)	8,474	(3,442)
<b>As of December 31, 2019</b>	\$ 13,288	\$ 3,518,894	\$ 10,846,937	\$ 32,496	\$ 14,411,615	\$ 30,658,893	\$ 45,070,508

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

**SK Holdings Co., Ltd. and its subsidiaries**  
**Consolidated statements of cash flows**  
**for the years ended December 31, 2019 and 2018**

(Korean won in millions and U.S. dollar in thousands)

Notes	Korean won		Translation into U.S. dollar (Note 2)	
	2019	2018	2019	2018
<b>Cash flows from operating activities:</b>				
Profit for the year	₩ 1,607,249	₩ 6,151,141	\$ 1,388,192	\$ 5,312,783
Non-cash adjustments	33 9,892,839	5,625,298	8,544,515	4,858,609
Working capital adjustments	33 (1,406,713)	(1,736,169)	(1,214,988)	(1,499,541)
Interest received	251,698	235,557	217,393	203,452
Interest paid	(1,445,879)	(1,210,594)	(1,248,816)	(1,045,599)
Dividends received	394,087	304,499	340,376	262,998
Income tax paid	(1,314,444)	(1,513,223)	(1,135,295)	(1,306,981)
<b>Net cash provided by operating activities</b>	<b>7,978,837</b>	<b>7,856,509</b>	<b>6,891,377</b>	<b>6,785,721</b>
<b>Cash flows from investing activities:</b>				
Decrease (increase) in short-term and long-term financial instruments, net	588,755	(518,981)	508,512	(448,248)
Increase in short-term and long-term loans, net	(307,529)	(48,019)	(265,615)	(41,474)
Decrease (increase) in short-term investment securities	35,037	(49,791)	30,262	(43,005)
Proceeds from disposal of long-term investment securities	276,235	490,158	238,586	423,353
Proceeds from disposal of investments in associates and joint ventures	784,919	139,606	677,940	120,579
Proceeds from disposal of property, plant and equipment	170,799	519,662	147,520	448,836
Proceeds from disposal of intangible assets	23,975	14,992	20,707	12,949
Proceeds from disposal of assets held for sale	-	100,493	-	86,797
Acquisition of long-term investment securities	(757,735)	(577,922)	(654,461)	(499,155)
Acquisition of investments in associates and joint ventures	(2,794,541)	(1,471,119)	(2,413,665)	(1,270,616)
Acquisition of property, plant and equipment	(7,824,981)	(6,275,589)	(6,758,491)	(5,420,270)
Acquisition of intangible assets	(570,144)	(928,053)	(492,437)	(801,566)
Net decrease in cash from changes in the scope of consolidation	(364,140)	(1,796,249)	(314,510)	(1,551,433)
Business transfer	-	179,399	-	154,948
Others, net	52,848	39,657	45,645	34,252
<b>Net cash used in investing activities</b>	<b>(10,686,502)</b>	<b>(10,181,756)</b>	<b>(9,230,007)</b>	<b>(8,794,053)</b>
<b>Cash flows from financing activities:</b>				
Increase in short-term borrowings, net	2,413,278	737,302	2,084,365	636,813
Increase in bonds payable and borrowings	9,536,823	13,278,054	8,237,021	11,468,349
Increase in long-term other payables	-	44,666	-	38,578
Decrease in bonds payable and borrowings	(5,964,859)	(9,239,190)	(5,151,891)	(7,979,953)
Decrease in long-term other payables	(429,462)	(582,532)	(370,929)	(503,137)
Decrease in lease liabilities	(1,117,974)	-	(965,602)	-
Payment of dividends	(1,816,265)	(1,511,072)	(1,568,721)	(1,305,124)
Cash inflows (outflows) from equity transactions within consolidated entities	925,881	(782,203)	799,690	(675,594)
Others, net	321,031	(15,297)	277,278	(13,213)
<b>Net cash provided by financing activities</b>	<b>3,868,453</b>	<b>1,929,728</b>	<b>3,341,211</b>	<b>1,666,719</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>1,160,788</b>	<b>(395,519)</b>	<b>1,002,581</b>	<b>(341,613)</b>
<b>Net foreign exchange effects</b>	<b>37,932</b>	<b>32,712</b>	<b>32,762</b>	<b>28,254</b>
<b>Cash and cash equivalents at the beginning of the year</b>	<b>6,783,035</b>	<b>7,145,842</b>	<b>5,858,555</b>	<b>6,171,914</b>
<b>Cash and cash equivalents at the end of the year</b>	<b>₩ 7,981,755</b>	<b>₩ 6,783,035</b>	<b>\$ 6,893,898</b>	<b>\$ 5,858,555</b>

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

**SK Holdings Co., Ltd. and its subsidiaries**  
**Notes to the consolidated financial statements**  
**December 31, 2019 and 2018**

**1. Corporate information**

**1.1 Parent**

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 of the acquisition date.

As of December 31, 2019, 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%, 7.34%, and 6.85%, respectively, as of December 31, 2019.

**1.2 Consolidated subsidiaries**

The Company and its subsidiaries (collectively, the “Group”) are engaged in petroleum refining, telecommunications, wholesale and retail, chemicals, construction and other industries. Subsidiaries whose accounts are included in the consolidated financial statements as of December 31, 2019 are as follows:

Subsidiary	Domicile	Principal business activity	The largest shareholders	Equity ownership (%)
SK Innovation Co., Ltd. (*2)	Korea	Resource development	SK Holdings Co., Ltd.	33.40%
SK Energy Co., Ltd.	Korea	Crude oil refining and sales	SK Innovation Co., Ltd.	100.00%
Netruck Co., Ltd.	Korea	Transportation and oil sales	SK Energy Co., Ltd.	100.00%
Jeju United FC Corporation	Korea	Sports association sponsoring	SK Energy Co., Ltd.	100.00%
Happy Didim Co., Ltd.	Korea	Service	SK Energy Co., Ltd.	100.00%
SK Energy Road Investment Co., Ltd.	Cayman	Investment	SK Energy Co., Ltd.	100.00%
SK Energy Hong Kong Co., Ltd.	Hong Kong	Investment	SK Energy Co., Ltd.	100.00%
Shandong SK Hightech Oil Co., Ltd.	China	Gas station operation	SK Energy Hong Kong Co., Ltd.	51.00%
SK Energy Road Investment (HK) Co., Ltd.	Hong Kong	Investment	SK Energy Road Investment Co., Ltd.	100.00%
Ningbo SK Baoying Asphalt Storage Co., Ltd.	China	Asphalt manufacturing	SK Energy Road Investment (HK) Co., Ltd.	51.00%
Hefei SK Baoying Asphalt Co., Ltd.	China	Asphalt manufacturing	SK Energy Road Investment (HK) Co., Ltd.	51.00%
Chongqing SK Asphalt Co., Ltd.	China	Asphalt manufacturing	SK Energy Road Investment (HK) Co., Ltd.	51.00%
SK Asphalt (Shanghai) Co., Ltd.	China	Logistics	SK Energy Road Investment (HK) Co., Ltd.	100.00%
SK Global Chemical Co., Ltd.	Korea	Chemicals manufacturing and sales	SK Innovation Co., Ltd.	100.00%
SK Global Chemical (China) Holding Co., Ltd.	China	Investment	SK Global Chemical Co., Ltd.	100.00%
SK Global Chemical China Limited.	Hong Kong	Investment	SK Global Chemical Co., Ltd.	100.00%
SK Global Chemical International Trading (Shanghai) Co., Ltd.	China	Petrochemicals sales	SK Global Chemical China Limited.	100.00%
SK Global Chemical International Trading (Guangzhou) Co., Ltd.	China	Petrochemicals sales	SK Global Chemical China Limited.	100.00%
SK Global Chemical Americas, Inc.	USA	Petrochemicals sales	SK Global Chemical Co., Ltd.	100.00%
SK Primacor Americas LLC	USA	Petrochemicals sales	SK Global Chemical Americas, Inc.	100.00%
SK Primacor Europe, S.L.U.	Spain	Petrochemicals sales	SK Global Chemical Americas, Inc.	100.00%
SK Saran Americas LLC	USA	Petrochemicals sales	SK Global Chemical Americas, Inc.	100.00%
SK Global Chemical Japan Co., Ltd.	Japan	Petrochemicals sales	SK Global Chemical Co., Ltd.	100.00%
SK Global Chemical Singapore Pte. Ltd.	Singapore	Petrochemicals sales	SK Global Chemical Co., Ltd.	100.00%
SK Global Chemical Investment Hong Kong Ltd.	Hong Kong	Investment	SK Global Chemical Co., Ltd.	100.00%
Ningbo SK Performance Rubber Co., Ltd.	China	Synthetic rubber manufacturing	SK Global Chemical Investment Hong Kong Ltd.	80.00%
Happymooum Co., Ltd.	Korea	Service	SK Global Chemical Co., Ltd.	100.00%
SK Functional Polymer, S.A.S	France	Petrochemicals sales	SK Global Chemical Co., Ltd.	100.00%
SK Incheon Petrochem Co., Ltd.	Korea	Chemicals manufacturing and sales	SK Innovation Co., Ltd.	100.00%
SK Trading International Co., Ltd.	Korea	Trading business	SK Innovation Co., Ltd.	100.00%
SK Energy International Pte. Ltd.	Singapore	Trading business	SK Trading International Co., Ltd.	100.00%
SK Energy Europe, Ltd.	UK	Trading business	SK Energy International Pte. Ltd.	100.00%
SK Energy Americas, Inc.	USA	Trading business	SK Energy International Pte. Ltd.	100.00%
SK Terminal B.V.	Netherlands	Investment	SK Energy International Pte. Ltd.	100.00%
SK Lubricants Co., Ltd.	Korea	Lubricants oil manufacturing and sales	SK Innovation Co., Ltd.	100.00%
Yubase Manufacturing Asia Corporation	Korea	Lubricants oil manufacturing and sales	SK Lubricants Co., Ltd.	70.00%
SK Energy Lubricants (Tianjin) Co., Ltd.	China	Lubricants oil manufacturing and sales	SK Lubricants Co., Ltd.	100.00%
SK Lubricants Americas, Inc.	USA	Lubricants oil sales	SK Lubricants Co., Ltd.	100.00%
SK Lubricants Europe B.V.	Netherlands	Lubricants oil sales	SK Lubricants Co., Ltd.	100.00%
SK Lubricants Japan Co., Ltd.	Japan	Lubricants oil sales	SK Lubricants Co., Ltd.	100.00%
SK Lubricants & Oils India Pvt. Ltd.	India	Lubricants oil sales	SK Lubricants Co., Ltd.	100.00%
Iberian Lube Base Oils, S.A.	Spain	Lubricants oil manufacturing and sales	SK Lubricants Co., Ltd.	70.00%
SK Lubricants Russia LLC	Russia	Lubricants oil sales	SK Lubricants Co., Ltd.	100.00%
SK Iotechnology Co., Ltd.	Korea	Plastic film manufacturing	SK Innovation Co., Ltd.	100.00%
SK Mobile Energy Co., Ltd.	Korea	Lithium battery manufacturing	SK Innovation Co., Ltd.	100.00%
SK Innovation Insurance (Bermuda), Ltd.	Bermuda	Insurance	SK Innovation Co., Ltd.	100.00%
SK USA, Inc.	USA	Management consulting services	SK Innovation Co., Ltd.	100.00%
Blue Dragon Energy Co., Ltd.	Hong Kong	Investment	SK Innovation Co., Ltd.	100.00%
Jiangsu SK Battery Certification Center	China	Lithium Battery Certification and Evaluation	Blue Dragon Energy Co., Limited.	100.00%
SK Battery Hungary Kft.	Hungary	Lithium battery manufacturing	SK Innovation Co., Ltd.	100.00%
SK Battery America, Inc.	USA	Lithium battery manufacturing	SK Innovation Co., Ltd.	100.00%
SK SK Battery Manufacturing Kft.	Hungary	Lithium battery manufacturing	SK Innovation Co., Ltd.	100.00%

**SK Holdings Co., Ltd. and its subsidiaries**  
**Notes to the consolidated financial statements**  
**December 31, 2019 and 2018**

**1.2 Consolidated subsidiaries (cont'd)**

Subsidiary	Domicile	Principal business activity	The largest shareholders	Equity ownership (*1)
SK Hi-Tech Battery Materials(Jiang Su) Co., Ltd.	China	Separation membrane for secondary battery manufacturing	SK Innovation Co., Ltd.	100.00%
SK Hi-Tech Battery Materials Poland Sp. Zo.o.	Poland	Separation membrane for secondary battery manufacturing	SK Innovation Co., Ltd.	100.00%
Happy Kium Co., Ltd.	Korea	Service	SK Innovation Co., Ltd.	100.00%
SK E&P Company, Ltd.	USA	Crude oil development	SK Innovation Co., Ltd.	100.00%
SK E&P America, Inc.	USA	Investment	SK Innovation Co., Ltd.	100.00%
SK Plymouth, LLC	USA	Crude oil development	SK E&P America, Inc.	100.00%
SK Permian, LLC	USA	Crude oil development	SK E&P America, Inc.	100.00%
SK E&P Operations America, LLC	USA	Crude oil development	SK E&P America, Inc.	100.00%
SK Nemaha, LLC	USA	Crude oil development	SK E&P America, Inc.	100.00%
Blue Sky United Energy Co., Ltd.	China	Lithium battery manufacturing	SK Innovation Co., Ltd.	100.00%
SK Telecom Co., Ltd. (*2)	Korea	Mobile telecommunications	SK Holdings Co., Ltd.	26.78%
SK Telink Co., Ltd.	Korea	International call and MVNO business	SK Telecom Co., Ltd.	100.00%
SK Telink Vietnam Co., Ltd.	Vietnam	Resale communication business	SK Telink Co., Ltd.	100.00%
SK Broadband Co., Ltd.	Korea	Wire communications	SK Telecom Co., Ltd.	100.00%
Home&Service Co., Ltd.	Korea	Information and communication facilities management business	SK Broadband Co., Ltd.	100.00%
SK Store Co., Ltd.	Korea	Other resale communication business	SK Broadband Co., Ltd.	100.00%
PS&Marketing Corp.	Korea	Resale communication business	SK Telecom Co., Ltd.	100.00%
Serviceace Co., Ltd.	Korea	Call center and telemarketing business	SK Telecom Co., Ltd.	100.00%
Service Top Co., Ltd.	Korea	Call center and telemarketing business	SK Telecom Co., Ltd.	100.00%
SK O&S Co., Ltd. (formerly, Network O&S Co., Ltd.)	Korea	Maintenance management	SK Telecom Co., Ltd.	100.00%
One store Co., Ltd.	Korea	Telecommunication service	SK Telecom Co., Ltd.	52.70%
SK Communications Co., Ltd.	Korea	Internet portal service	SK Telecom Co., Ltd.	100.00%
11street Co., Ltd.	Korea	E-commerce	SK Telecom Co., Ltd.	80.30%
Life & Security Holdings Co., Ltd.	Korea	Holding Company	SK Telecom Co., Ltd.	55.00%
ADT Caps Co., Ltd.	Korea	Automatic security	Life & Security Holdings Co., Ltd.	100.00%
CAPSTEC Co., Ltd.	Korea	Manned security	Life & Security Holdings Co., Ltd.	100.00%
ADT Security Co., Ltd.	Korea	Sales and trade of anti-theft devices and surveillance device	Life & Security Holdings Co., Ltd.	100.00%
Quantum Innovation Private Equity Joint Venture I	Korea	Holding Company	SK Telecom Co., Ltd.	59.90%
SK Infosec Co., Ltd.	Korea	Information security service	SK Telecom Co., Ltd.	100.00%
SKInfosec Information Technology(Wuxi) Co., Ltd.	China	System software development and supplying	SK Infosec Co., Ltd.	100.00%
SK Planet Co., Ltd.	Korea	Telecommunication service and system software development and supplying	SK Telecom Co., Ltd.	98.65%
SK M & Service Co., Ltd.	Korea	Internet website service	SK Planet Co., Ltd.	100.00%
SKP Global Holdings Pte. Ltd.	Singapore	Holding Company	SK Planet Co., Ltd.	100.00%
SKP America, LLC	USA	Digital contents sourcing and presenting	SK Planet Co., Ltd.	100.00%
K-Net Culture & Contents Venture Fund	Korea	Investment fund	SK Planet Co., Ltd.	59.00%
SK Telecom China Holding Co., Ltd.	China	Holding Company	SK Telecom Co., Ltd.	100.00%
SK Global Healthcare Business Group, Ltd.	Hong Kong	Investment	SK Telecom Co., Ltd.	100.00%
SKT Americas, Inc.	USA	Management consulting and information gathering	SK Telecom Co., Ltd.	100.00%
YTK Investment, Ltd.	Cayman	Investment	SK Telecom Co., Ltd.	100.00%
Atlas Investment, Ltd.	Cayman	Investment	SK Telecom Co., Ltd.	100.00%
SK Telecom Innovation Fund, L.P.	USA	Investment	Atlas Investment, Ltd.	100.00%
SK Telecom China Fund I L.P.	Cayman	Investment	Atlas Investment, Ltd.	100.00%
SK Telecom TMT investment Corp.	USA	Investment	SK Telecom Co., Ltd.	100.00%
Dreamus Company Co., Ltd. (formerly, Iriver Co., Ltd.)	Korea	Video and audio equipment manufacturing	SK Telecom Co., Ltd.	51.49%
Iriver Enterprise Ltd.	Hong Kong	Chinese subsidiary management	Dreamus Company Co., Ltd. (formerly, Iriver Co., Ltd.)	100.00%
Iriver China Co., Ltd.	China	MP3,4 production and sales	Iriver Enterprise, Ltd.	100.00%
Dongguan iriver Electronics Co., Ltd.	China	Electronic book production and sales	Iriver Enterprise, Ltd.	100.00%
Life Design Company Japan Inc.	Japan	Japan goods sales	Dreamus Company Co., Ltd. (formerly, Iriver Co., Ltd.)	100.00%
SK Telecom Japan Inc.	Japan	Management consulting and information gathering	SK Telecom Co., Ltd.	100.00%
SK Planet Japan, K. K.	Japan	Digital contents sourcing and presenting	SK Telecom Japan Inc.	79.78%
Id Quantique SA	Swiss	Quantum information and communication business	SK Telecom Co., Ltd.	66.80%
Id Quantique Ltd.	Korea	Quantum information and communication business	Id Quantique SA	100.00%
FSK L&S Co., Ltd.	Korea	Cargo Transport Shipment and Logistics Consulting Project	SK Telecom Co., Ltd.	60.00%
FSK L&S (Shanghai) Co., Ltd.	China	Transportation industry	FSK L&S Co., Ltd.	100.00%
FSK L&S(Hungary) Co., Ltd.	Hungary	Transportation industry	FSK L&S Co., Ltd.	100.00%
Incross Co., Ltd. (*2)	Korea	Media agency	SK Telecom Co., Ltd.	34.60%
Infra Communications Co., Ltd.	Korea	Service operation business	Incross Co., Ltd.	100.00%
Mindknock Co., Ltd.	Korea	Software development	Incross Co., Ltd.	100.00%
Happy Hanoil Co., Ltd.	Korea	Service	SK Telecom Co., Ltd.	100.00%
SK MENA Investment B.V.	Netherlands	Investment	SK Telecom Co., Ltd.	100.00%
SK Latin America Investment S.A.	Spain	Investment	SK Telecom Co., Ltd.	100.00%
SK Technology Innovation Company	Cayman	Research and development	SK Telecom Co., Ltd.	96.88%
SK Networks Co., Ltd. (*2)	Korea	Distribution and trading business	SK Holdings Co., Ltd.	39.14%
SK Networks Service Co., Ltd.	Korea	Communications equipment repair service	SK Networks Co., Ltd.	86.50%
SK Pinx Co., Ltd.	Korea	Golf club operating	SK Networks Co., Ltd.	100.00%
SK Magic Co., Ltd.	Korea	Household appliances manufacturing, sales and rent	SK Networks Co., Ltd.	100.00%
SK Magic Service Co., Ltd.	Korea	House appliances repair and others	SK Magic Co., Ltd.	100.00%
SK Magic Vietnam Company Limited	Vietnam	Household appliances sales and rent	SK Magic Co., Ltd.	100.00%
SK Networks Retailis Malaysia Sdn. Bhd.	Malaysia	Household appliances sales and rent	SK Magic Co., Ltd.	100.00%
Mokgam Service	Korea	Real property lease	SK Networks Co., Ltd.	100.00%
SK Rent-a-Car Co., Ltd. (formerly, AJ Rent a Car Co., Ltd.)	Korea	Car rental	SK Networks Co., Ltd.	64.23%
SK Rent-a-Car Service Co., Ltd.	Korea	Business support services	SK Rent-a-Car Co., Ltd. (formerly, AJ Rent a Car Co., Ltd.)	100.00%

**SK Holdings Co., Ltd. and its subsidiaries**  
**Notes to the consolidated financial statements**  
**December 31, 2019 and 2018**

**1.2 Consolidated subsidiaries (cont'd)**

Subsidiary	Domicile	Principal business activity	The largest shareholders	Equity Ownership (%)
SK Networks (China) Holdings Co., Ltd.	China	Holding Company	SK Networks Co., Ltd.	100.00%
Liaoning SK Networks Real Industrial Estate Development Co., Ltd.	China	Real estate development	SK Networks (China) Holdings Co., Ltd.	100.00%
Shenyang SK Bus Terminal Co., Ltd.	China	Bus terminal business	SK Networks (China) Holdings Co., Ltd.	75.00%
SK Networks (Liaoning) Logistics Co., Ltd.	China	Distribution and logistics	SK Networks (China) Holdings Co., Ltd.	100.00%
SK Networks (Dandong) Energy Co., Ltd.	China	Petroleum sales	SK Networks (China) Holdings Co., Ltd.	100.00%
Shenyang SK Networks Energy Co., Ltd.	China	Petroleum sales	SK Networks Co., Ltd.	100.00%
SK (GZ FreeZone) Co., Ltd.	China	Trading business	SK Networks Co., Ltd.	100.00%
SK Networks (Shanghai) Co., Ltd.	China	Trading business	SK Networks Co., Ltd.	100.00%
POSK (Pinghu) Steel Processing Center Co., Ltd.	China	Steel processing and sales	SK Networks Co., Ltd.	80.00%
SK Networks Hong Kong Ltd.	Hong Kong	Trading business	SK Networks Co., Ltd.	100.00%
SK (Guangzhou) Metal Co., Ltd.	China	Steel processing and sales	SK Networks Hong Kong Ltd.	100.00%
SK Networks (Xiamen) Steel Processing Center Co., Ltd.	China	Steel processing and sales	SK Networks Hong Kong Ltd.	100.00%
SK Networks Japan Co., Ltd.	Japan	Trading business	SK Networks Co., Ltd.	100.00%
SK Networks Deutschland GmbH	Germany	Trading business	SK Networks Co., Ltd.	100.00%
Daiyang SK Networks SAN, VE TIC, Ltd. STI (*4)	Turkey	Steel processing and sales	SK Networks Co., Ltd.	51.22%
SK Networks Resources Australia Pty. Ltd.	Australia	Resource development	SK Networks Co., Ltd.	100.00%
SK Networks Middle East FZE	UAE	Trading business	SK Networks Co., Ltd.	100.00%
SK Brasil LTDA	Brazil	Trading business	SK Networks Co., Ltd.	100.00%
SK Networks Trading Malaysia Sdn Bhd	Malaysia	Trading business	SK Networks Co., Ltd.	100.00%
SK Networks America, Inc.	USA	Trading business	SK Networks Co., Ltd.	100.00%
SK Networks Brasil Intermediacao de Negocios LTDA.	Brazil	Trading business	SK Networks Co., Ltd.	100.00%
Networks Tejarat Pars	Iran	Trading business	SK Networks Co., Ltd.	100.00%
SKC Co., Ltd. (*2)	Korea	Petrochemicals manufacturing	SK Holdings Co., Ltd.	41.00%
Woori Fine Chem Co., Ltd.	Korea	Petrochemicals manufacturing	SKC Co., Ltd.	100.00%
SK Telesys Co., Ltd.	Korea	Communications equipment manufacturing and sales	SKC Co., Ltd.	79.39%
Techdream Co., Ltd.	Hong Kong	Semiconductor component	SK Telesys Co., Ltd.	100.00%
SKC INFRA SERVICE CO., Ltd.	Korea	Electric work business and Information Communication Business	SK Telesys Co., Ltd.	100.00%
SKC Solmics Co., Ltd.	Korea	Semiconductor component manufacturing	SKC Co., Ltd.	57.70%
Solmics Taiwan Co., Ltd.	Taiwan	Semiconductor component distribution	SKC Solmics Co., Ltd.	100.00%
Solmics Shanghai Co., Ltd.	China	Semiconductor component distribution	SKC Solmics Co., Ltd.	100.00%
SKC Solmics Hong kong Co., Ltd.	Hong Kong	SPC	SKC Solmics Co., Ltd.	100.00%
SKC-Eco Solution Co., Ltd.	Korea	Film manufacturing	SKC Co., Ltd.	100.00%
SKC (Jiangsu) High tech Plastics Co., Ltd.	China	Film manufacturing	SKC Co., Ltd.	100.00%
SKC, Inc.	USA	Manufacturing	SKC Co., Ltd.	100.00%
SKC Europe GmbH	Germany	Sales	SKC Co., Ltd.	100.00%
SK Bioland Co., Ltd. (*2)	Korea	Manufacturing	SKC Co., Ltd.	27.94%
Bioland Biotech Co., Ltd.	China	Research and manufacturing	SK Bioland Co., Ltd.	100.00%
Bioland Haimen Co., Ltd.	China	Manufacturing	Bioland Biotech Co., Ltd.	100.00%
SKC Hi-Tech&Marketing Co., Ltd.	Korea	Film manufacturing	SKC Co., Ltd.	100.00%
SKC Hi-Tech&Marketing (Suzhou) Co., Ltd.	China	Film manufacturing	SKC Hi-Tech&Marketing Co., Ltd.	100.00%
SKC Hi-Tech&Marketing Taiwan Co., Ltd.	Taiwan	Film manufacturing	SKC Hi-Tech&Marketing Co., Ltd.	100.00%
SKC Hi-Tech&Marketing Polska SP.Z.O.O	Poland	Film manufacturing	SKC Hi-Tech&Marketing Co., Ltd.	100.00%
SKC Hi-Tech&Marketing USA LLC	USA	Film manufacturing	SKC Hi-Tech&Marketing Co., Ltd.	100.00%
SKC PU Specialty Co., Ltd.	Hong Kong	Special purpose company	SKC Co., Ltd.	100.00%
SKC (Nantong) PU Specialty Co., Ltd.	China	Electronic materials manufacturing	SKC PU Specialty Co., Ltd.	100.00%
SKC-ENF Electronic Materials Ltd.	Hong Kong	Special purpose company	SKC Co., Ltd.	75.10%
SKC (Nantong) Semiconductor Materials Technology Co., Ltd.	China	Electronic materials manufacturing	SKC-ENF Electronic Materials Ltd.	100.00%
SE (JIANGSU) Electronic Materials Co., Ltd.	China	Sales of raw chemical materials and chemical products related to semiconductor	SKC-ENF Electronic Materials Ltd.	100.00%
SK E&S Co., Ltd.	Korea	City gas business and power generation	SK Holdings Co., Ltd.	90.00%
Kangwon City Gas Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Yeongnam Energy Service Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Ko-one Energy Service Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Narae Energy Service Co., Ltd. (*5)	Korea	Integrated energy service	SK E&S Co., Ltd.	100.00%
Pusan City Gas Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	67.32%
Jeonbuk Energy Service Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Chonnam City Gas Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Chungcheong Energy Service Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Paju Energy Service Co., Ltd. (*6)	Korea	Energy business	SK E&S Co., Ltd.	51.00%
Wirye Energy Service Co., Ltd. (*5)	Korea	Integrated energy service	SK E&S Co., Ltd.	100.00%
Yeoju Energy Service Co., Ltd.	Korea	Integrated energy service	SK E&S Co., Ltd.	100.00%
SK E&S Hong Kong Co., Ltd.	Hong Kong	City gas business	SK E&S Co., Ltd., Pusan City Gas Co., Ltd.	100.00%
SK E&S Australia Pty. Ltd.	Australia	Resource development	SK E&S Co., Ltd.	100.00%
SK E&S Americas, Inc.	USA	Holding company	SK E&S Co., Ltd.	100.00%
SK E&S LNG, LLC	USA	Liquefied natural gas sales	SK E&S Americas, Inc.	100.00%
DewBlaine Energy, LLC	USA	Resource development	SK E&S Americas, Inc.	100.00%
CAILIP Gas Marketing, LLC	USA	LNG sales and purchase	SK E&S Americas, Inc.	100.00%
Rnes Holdings, LLC	USA	Renewable / electric power business	SK E&S Americas, Inc.	100.00%
Storage Solution Holdings, LLC	USA	Electric power business	Rnes Holdings, LLC	100.00%
CAES, LLC	USA	Electric power business	Storage Solution Holdings, LLC	100.00%
Prism Energy International China Limited.	China	Liquefied natural gas sales	SK E&S Co., Ltd.	100.00%
Prism Energy International Zhoushan Limited.	China	Liquefied natural gas sales	Prism Energy International China Limited.	100.00%
Prism Energy International Pte. Ltd.	Singapore	Liquefied natural gas sales	SK E&S Co., Ltd.	100.00%
Fajar Energy International Pte. Ltd.	Singapore	Liquefied natural gas sales	Prism Energy International Pte. Ltd.	100.00%
Prism Energy International Hong Kong, Ltd.	Hong Kong	LNG trading business	Prism Energy International Pte. Ltd.	100.00%
PT Prism Nusantara Internationa (formerly PT SK E&S Nusantara)	Indonesia	LNG importation	SK E&S Co., Ltd.	100.00%
SK E&S Dominicana S.R.L	Dominica	LNG importation	SK E&S Co., Ltd.	100.00%
SK Engineering & Construction Co., Ltd. (*2)	Korea	Construction	SK Holdings Co., Ltd.	44.48%
Seosuwon Development Company (*2)	Korea	Real estate development and construction	SK Engineering & Construction Co., Ltd.	19.90%
SK TNS Co., Ltd. (*3)	Korea	Construction and services	SK Engineering & Construction Co., Ltd.	100.00%
SKEC Nanjing Co., Ltd.	China	Construction	SK Engineering & Construction Co., Ltd.	100.00%
SKEC (Thai), Ltd.	Thailand	Construction	SK Engineering & Construction Co., Ltd.	100.00%
Thai Woo Ree Engineering Co., Ltd.	Thailand	Construction	SKEC (Thai), Ltd.	99.77%
SKEC Anadolu EC, LLC	Turkey	Construction	SK Engineering & Construction Co., Ltd.	100.00%
SK E&C Betek Corporation	USA	Real estate development and construction	SK Engineering & Construction Co., Ltd.	100.00%
Mesa Verde RE Ventures, LLC	USA	Real estate development	SK E&C Betek Corporation	100.00%

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**1.2 Consolidated subsidiaries (cont'd)**

Subsidiary	Domicile	Principal business activity	The largest shareholders	Equity ownership (%)
SKEC Consultores Ecuador, S.A	Ecuador	Construction	SK Engineering & Construction Co., Ltd.	100.00%
Sunlake Co., Ltd.	Canada	Construction and services	SK Engineering & Construction Co., Ltd.	100.00%
SK HOLDCO PTE. LTD.	Singapore	Holding Company	SK Engineering & Construction Co., Ltd.	63.51%
Silvertown Investco Limited.	UK	Construction	SK Engineering & Construction Co., Ltd.	100.00%
SK Materials Co., Ltd. (*2)	Korea	Special gas manufacturing and sales	SK Holdings Co., Ltd.	49.10%
SK Materials Japan Co., Ltd.	Japan	Special gas sales	SK Materials Co., Ltd.	95.00%
SK Materials Taiwan Co., Ltd.	Taiwan	Special gas sales	SK Materials Co., Ltd.	100.00%
SK Materials (Jiangsu) Co., Ltd.	China	Special gas manufacturing and sales	SK Materials Co., Ltd.	100.00%
SK Materials (Xian) Co., Ltd.	China	Trading business and warehouse operation	SK Materials Co., Ltd.	100.00%
SK Airgas Co., Ltd.	Korea	Industrial gas sales	SK Materials Co., Ltd.	100.00%
SK Tri Chem Co., Ltd.	Korea	Manufacturing and sales of precursors and others	SK Materials Co., Ltd.	65.00%
SK Showa Denko Co., Ltd.	Korea	Sales of raw chemical materials and chemical products related to semiconductor	SK Materials Co., Ltd.	51.00%
SK Materials (Shanghai) Co., Ltd.	China	Special gas sales	SK Materials Co., Ltd.	100.00%
Happy Companion Co., Ltd.	Korea	Cleaning, Laundry service	SK Materials Co., Ltd.	100.00%
HANYU CHEMICAL Co.,LTD.	Korea	Industrial gas manufacturing	SK Materials Co., Ltd.	100.00%
SK Siltron Co., Ltd.	Korea	Silicon wafer for electronic industry manufacturing and sales	SK Holdings Co., Ltd.	51.00%
SK Siltron America, Inc.	USA	Silicon wafer for electronic industry manufacturing and sales	SK Siltron Co., Ltd.	100.00%
SK Siltron Japan, Inc.	Japan	Silicon wafer for electronic industry manufacturing and sales	SK Siltron Co., Ltd.	100.00%
SKSiltron Shanghai Co., Ltd.	China	Silicon wafer for electronic industry	SK Siltron Co., Ltd.	100.00%
SK Siltron USA, Inc.	USA	Investment	SK Siltron Co., Ltd.	100.00%
SK Siltron CSS, LLC	USA	Silicon wafer for electronic industry manufacturing and sales	SK Siltron USA, Inc.	100.00%
Happyfilling Co., Ltd.	Korea	Service	SK Siltron Co., Ltd.	100.00%
SK Biopharmaceuticals Co., Ltd.	Korea	Medicine and life science	SK Holdings Co., Ltd.	100.00%
SK Life Science, Inc.	USA	Life science	SK Biopharmaceuticals Co., Ltd.	100.00%
SK S.E.Asia Pte. Ltd.	Singapore	Investment	SK Holdings Co., Ltd.	100.00%
Essencore Limited	Hong Kong	Manufacturing and distribution of semiconductor modules	SK S.E.Asia Pte. Ltd.	100.00%
Essencore (ShenZhen) Limited	China	Consulting for computer system integration	Essencore Limited	100.00%
SK China Company, Ltd.	Hong Kong	Consulting and investment	SK Holdings Co., Ltd.	88.13%
SKY Property Mgmt (Beijing) Co., Ltd.	China	Real estate management	SK China Company, Ltd.	100.00%
SK Bio Energy Hong Kong Co., Ltd.	Hong Kong	Biomass electricity generation	SK China Company, Ltd.	69.40%
SK Property Investment Management Co., Ltd.	Hong Kong	Real estate investment	SK China Company, Ltd.	100.00%
SK Industrial Development China Co., Ltd.	Hong Kong	Investment	SK China Company, Ltd.	100.00%
Shanghai SKY Real Estate Development Co., Ltd.	China	Real estate investment	SK Industrial Development China Co., Ltd.	100.00%
SK China Investment Management Co., Ltd.	Hong Kong	Real estate investment	SK China Company, Ltd.	100.00%
SK International Agro-Products Logistics Development Co., Ltd.	Hong Kong	Agriculture product logistics	SK China Investment Management Co., Ltd.	100.00%
SK International Agro-SideLine Products Park Co., Ltd.	China	Agriculture product logistics	SK International Agro-Products Logistics Development Co., Ltd.	76.00%
SK Auto Service Hong Kong Co., Ltd.	Hong Kong	Holding Company	SK China Company, Ltd.	100.00%
SK (Shenyang) auto rental Co., Ltd.	China	Car rental	SK Auto Service Hong Kong Co., Ltd.	100.00%
SK (Beijing) auto rental Co., Ltd.	China	Car rental	SK Auto Service Hong Kong Co., Ltd.	100.00%
SK Rent-A-Car (Qingdao) Co., Ltd.	China	Car rental	SK Auto Service Hong Kong Co., Ltd.	100.00%
Skyline Auto Financial Leasing Co., Ltd.	Hong Kong	Investment	SK Auto Service Hong Kong Co., Ltd.	100.00%
SK Financial Leasing Co., Ltd.	China	Financial lease	Skyline Auto Financial Leasing Co., Ltd.	100.00%
SK China (Beijing) Co., Ltd.	China	Consulting	SK China Company, Ltd.	100.00%
SKY Property Management Ltd.	Virgin Islands	Investment	SK China Company, Ltd.	100.00%
SKY Investment Co., Ltd.	China	Real estate management	SKY Property Management Ltd.	100.00%
SK China Real Estate Co., Ltd.	Hong Kong	Real estate investment	SKY Property Management Ltd.	100.00%
SK China Creative Industry Development Co., Ltd.	China	Service	SKY Property Management Ltd.	100.00%
SK C&C Beijing Co., Ltd.	China	Consulting for computer system integration and others	SK Holdings Co., Ltd.	100.00%
SK C&C Chengdu Co., Ltd.	China	Consulting for computer system integration and others	SK C&C Beijing Co., Ltd.	100.00%
SK C&C India Pvt. Ltd.	India	Consulting for computer system integration and others	SK Holdings Co., Ltd.	100.00%
S&G Technology	Saudi Arabia	Consulting for computer system integration and others	SK Holdings Co., Ltd.	51.00%
Saturn Agriculture Investment Co., Ltd.	Hong Kong	Investment	SK Holdings Co., Ltd.	51.41%
SK Investment Management Co., Ltd.	Hong Kong	Investment	SK Holdings Co., Ltd.	100.00%
SK Semiconductor Investments Co., Ltd.	Hong Kong	Investment Management	SK Investment Management Co., Ltd.	100.00%
Gemini Partners Pte. Ltd.	Singapore	Consulting	SK Holdings Co., Ltd., SK Innovation Co., Ltd., SK Telecom Co., Ltd., and SK E&S Co., Ltd.	80.00%
Solaris Partners Pte. Ltd.	Singapore	Consulting	Gemini Partners Pte. Ltd.	100.00%
SK GI Management	Cayman	Investment	SK Holdings Co., Ltd.	100.00%
Plutus Capital NY, Inc.	USA	Investment	SK Holdings Co., Ltd.	100.00%
Hudson Energy NY, LLC	USA	Investment	Plutus Capital NY, Inc.	50.13%
Hudson Energy NY II, LLC	USA	Investment	Plutus Capital NY, Inc.	100.00%
Hudson Energy NY III, LLC	USA	Investment	Plutus Capital NY, Inc.	50.50%
Plutus Fashion NY, Inc.	USA	Fashion	SK Holdings Co., Ltd.	100.00%
Wonderland NY, Inc.	USA	Investment	Plutus Fashion NY, Inc.	100.00%
Atlas NY LLC	USA	Investment	Plutus Capital NY, Inc.	61.24%
SK South East Asia Investment Pte. Ltd.	Singapore	Investment	SK Innovation Co., Ltd., SK Telecom Co., Ltd., and SK E&S Co., Ltd.	80.00%
SK Investment Vina I Pte. Ltd.	Singapore	Investment	SK South East Asia Investment Pte. Ltd.	50.01%
SK Investment Vina II Pte. Ltd.	Singapore	Investment	SK South East Asia Investment Pte. Ltd.	50.01%
SK Pharmteco Inc. (formerly, Alchemy Acquisition Corp.)	USA	Investment	SK Holdings Co., Ltd.	100.00%
SK Biotek Co., Ltd.	Korea	Drug medicine	SK Pharmteco Inc. (formerly, Alchemy Acquisition Corp.)	100.00%
SK Biotek Ireland Limited	Ireland	Pharmaceutical Manufacturing	SK Pharmteco Inc. (formerly, Alchemy Acquisition Corp.)	100.00%
SK BIOTEK USA, Inc.	USA	Medicine and life science	SK Pharmteco Inc. (formerly, Alchemy Acquisition Corp.)	100.00%
Abrasax Investment Inc.	USA	Investment	SK Pharmteco Inc. (formerly, Alchemy Acquisition Corp.)	100.00%
Fine Chemicals Holdings Corp.	USA	Investment	Abrasax Investment Inc.	100.00%
AMPAC Fine Chemicals, LLC	USA	Drug medicine	Fine Chemicals Holdings Corp.	100.00%
AMPAC Fine Chemicals Texas, LLC	USA	Drug medicine	AMPAC Fine Chemicals, LLC	100.00%
AMPAC Fine Chemicals Virginia, LLC	USA	Drug medicine	AMPAC Fine Chemicals, LLC	100.00%
Golden Pearl EV Solutions Limited	Hong Kong	Investment	SK Holdings Co., Ltd.	100.00%
SK Forest Co., Ltd.	Korea	Landscaping and planting business	SK Holdings Co., Ltd.	100.00%
HWECHAN	Korea	Condo, Resort Operation	SK Holdings Co., Ltd.	100.00%

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**1.2 Consolidated subsidiaries (cont'd)**

- (\*1) The equity ownership is based on ordinary shares and includes indirect investments held by the consolidated subsidiaries.
- (\*2) SK Innovation Co., Ltd. and 8 other companies are included in the consolidated financial statements as the Company is able to exercise de facto control. The remaining voting rights of SK Innovation Co., Ltd. and 8 other companies are widely dispersed, so it is determined that the Company has voting rights to exercise de facto control.
- (\*3) The Group owns 100% of the ordinary shares of SK TNS Co., Ltd. but holds 73.1% of equity ownership respectively, due to the issuance of its preferred shares having voting rights.
- (\*4) The assets and liabilities of Daiyang SK Networks SAN. VE TIC. Ltd. STI are classified as assets and liabilities held for sale (see Note 31 Non-current assets and non-current liabilities classified as held for sale).
- (\*5) Wirye Energy Services Co., Ltd. and Narae Energy Services Co., Ltd., the subsidiaries of the Group, merged on January 1, 2020, and Narae Energy Services Co., Ltd. became the surviving entity after the merger.
- (\*6) The Group disposed of 49% of the equity during the current period.

**1.3 Changes in consolidated subsidiaries**

Changes in the consolidated subsidiaries for the year ended December 31, 2019 are as follows:

December 31, 2018	Inclusion	Exclusion	December 31, 2019
260	40	12	288

For the year ended December 31, 2019, subsidiaries newly included in consolidation are as follows:

Subsidiary	Reasons for changes
Happy Kium Co., Ltd.	Establishment (29 companies)
Happy Didim Co., Ltd.	
SK Battery America, Inc.	
SK Battery Manufacturing Kft.	
SK Hi-tech Battery Materials Poland Sp. Zo.o.	
SK Investment Vina II Pte. Ltd.	
Hudson Energy NY III LLC	
SK Telecom TMT Investment Corp.	
Jiangsu SK Battery Certification Center	
Rnes Holdings, LLC	
Storage Solution Holdings, LLC	
Caes, LLC	
Prism Energy International China Limited.	
Happy Chaeum Co., Ltd.	
SKinfosec Information Technology (Wuxi) Co., Ltd.	
FSK L&S (Hungary) Co., Ltd.	
SK Telecom CS T1 Co., Ltd.	
Happy Hanool Co., Ltd.	
Prism Energy International Zhoushan Limited.	
SK Materials (Shanghai) Co., Ltd.	
Happy Companion Co., Ltd.	
SK Siltron Shanghai Co., Ltd.	
Happymoeum Co., Ltd.	
Blue Sky United Energy Co., Ltd.	
SK Functional Polymer, S.A.S	
Silvertown Investco Limited.	
SKC solmics Hong Kong Co., Ltd.	
SK Siltron USA, Inc.	
SK Siltron CSS, LLC.	



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**1.3 Changes in consolidated subsidiaries (cont'd)**

Subsidiary	Reasons for changes
SK Rent-a-Car Co., Ltd. (formerly, AJ Rent a Car Co., Ltd.) Linkable Co., Ltd. and 2 other companies Incross Co., Ltd. Infra Communications Co., Ltd. Mindknock Co., Ltd. HWEECHAN HANYU CHEMICAL CO.,LTD. SK International Agro-Sideline Products Park Co., Ltd. SK ie technology Co., Ltd.	Acquisition (10 companies)          Physical division (1 company)

For the year ended December 31, 2019, subsidiaries excluded from consolidation are as follows:

Subsidiary	Reasons for changes
SK Beijing Investment Management Limited Linkable Co., Ltd. Shopkick Management Company, Inc. Shopkick, Inc. SK Golden Tide Plastics (Yantai) Co., Ltd. Iriver Inc. SK Telecom CS T1 Co., Ltd. Beijing SK Magellan Capital Advisors Co., Ltd. SK Computer and Communication LLC. and 1 other company Groovers Co., Ltd. Groovers Japan Co., Ltd.	Disposal (7 companies)          Liquidation, etc. (3 companies) Merge (2 companies)

**1.4 Condensed financial information of significant consolidated subsidiaries**

Details of condensed financial information of the significant subsidiaries as of and for the year ended December 31, 2019 are as follows (Korean won in millions):

Subsidiary	Total assets	Total liabilities	Sales	Net income (loss)
SK Innovation Co., Ltd.	₩ 16,355,887	₩ 3,279,206	₩ 3,006,129	₩ 792,140
SK Energy Co., Ltd.	14,593,983	9,270,409	32,253,828	(37,109)
SK Global Chemical Co., Ltd.	5,888,445	2,186,116	9,894,988	365,330
SK Incheon Petrochem Co., Ltd.	5,740,045	3,558,499	6,766,525	(17,087)
SK Trading International Co., Ltd.	1,855,284	1,057,627	11,478,913	188,168
SK Lubricants Co., Ltd.	2,566,358	1,257,937	2,992,148	199,076
SK Global Chemical International Trading (Shanghai) Co., Ltd.	174,253	146,371	1,419,871	4,153
SK Energy International Pte. Ltd.	2,851,912	2,153,260	24,292,166	68,526
SK Energy America, Inc.	483,267	405,750	4,570,263	6,004
SK Energy Europe, Ltd.	164,882	86,131	3,565,047	(7,947)
SK Telecom Co., Ltd.	30,839,367	13,449,628	11,416,215	980,338
SK Broadband Co., Ltd.	4,447,549	2,811,417	3,178,805	48,583
PS&Marketing Corp.	439,947	225,942	1,684,576	96
SK Planet Co., Ltd.	595,838	278,438	275,544	1,214
11street. Co., Ltd.	923,424	446,432	530,489	(5,077)
Life & Security Holdings Co., Ltd. (*1)	2,639,781	2,330,920	913,301	12,703
SK Networks Co., Ltd.	7,673,322	5,580,941	10,574,129	(85,962)
SK Magic Co., Ltd.	788,743	537,265	852,801	42,857
SK Rent-a-Car Co., Ltd. (formerly, AJ Rent a Car Co., Ltd.) (*2)	1,641,880	1,297,141	640,883	15,575
SKC Co., Ltd.	2,833,521	1,302,571	1,229,901	14,016
SK E&S Co., Ltd.	5,197,692	2,255,620	814,768	1,054,896
Yeongnam Energy Service Co., Ltd.	432,703	220,182	668,162	22,452
Ko-one Energy Service Co., Ltd.	816,657	447,844	1,076,017	10,448
Narae Energy Service Co., Ltd.	654,862	502,237	283,934	(4,419)
Pusan City Gas Co., Ltd.	1,030,720	360,984	972,789	48,928
Chungcheong Energy Service Co., Ltd.	334,843	201,805	514,281	22,367
Paju Energy Service Co., Ltd.	1,890,034	1,172,143	1,284,672	141,685
Wirye Energy Service Co., Ltd.	786,404	514,166	340,159	17,764
SK Engineering & Construction Co., Ltd.	4,516,714	3,283,536	7,843,969	192,868
SK TNS Co., Ltd.	268,833	242,562	701,752	38,577
SK Materials Co., Ltd. (*1)	1,607,675	1,087,368	772,194	143,302
SK Siltron Co., Ltd. (*1)	2,975,667	2,078,199	1,542,938	214,834

(\*1) The condensed financial information is consolidated financial information.

(\*2) Sales and net income are the amounts after the business combination.

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**1.5 Disclosure of significant non-controlling interests in subsidiaries**

Information about significant non-controlling interests in subsidiaries as of and for the year ended December 31, 2019 is as follows (Korean won in millions):

	December 31, 2019					
	SK Innovation	SK Telecom	SK Networks	SKC	SK E&S	SK Engineering& Construction
	Co., Ltd.	Co., Ltd.	Co., Ltd.	Co., Ltd.	Co., Ltd.	Co., Ltd.
Percentage of the non-controlling ownership	64.99%	70.43%	59.64%	56.55%	10.00%	53.79%
Current assets	₩ 17,352,777	₩ 8,102,294	₩ 3,965,679	₩ 992,720	₩ 2,596,330	₩ 3,557,574
Non-current assets	22,173,280	36,509,326	6,173,093	2,980,269	8,322,683	2,095,788
Current liabilities	10,456,381	7,787,722	4,521,974	1,043,160	2,980,888	4,008,770
Non-current liabilities	10,860,052	14,000,362	3,311,545	1,203,455	3,600,327	724,221
Net assets	18,209,624	22,823,536	2,305,253	1,726,374	4,337,798	920,371
Book value of the non-controlling interests	12,316,673	15,417,007	1,502,098	1,064,047	1,737,385	624,931
Sales	49,876,534	17,743,702	13,054,240	2,539,766	6,561,673	8,954,563
Net income (loss)	65,775	861,942	(122,613)	67,392	697,133	203,665
Total comprehensive income (loss)	150,649	862,951	(126,561)	69,667	743,599	188,398
Net income (loss) of the non-controlling interests	56,120	477,594	(78,311)	38,254	158,925	81,217
Total comprehensive income (loss) of the non-controlling interests	96,941	451,695	(80,906)	39,533	162,331	71,106
Net cash flows from operating activities	1,825,834	3,986,082	466,351	40,534	1,174,575	236,069
Net cash flows from investing activities	(3,166,766)	(3,582,523)	(411,217)	(272,725)	(99,643)	(189,412)
Net cash flows from financing activities before dividends paid to the non-controlling interests	2,442,934	(89,812)	(20,582)	173,726	(136,754)	(35,173)
Dividends paid to the non-controlling interests	(756,859)	(547,022)	(20,329)	(23,273)	(155,105)	(16,043)
Net increase (decrease) in cash and cash equivalents	345,143	(233,275)	14,223	(81,738)	783,073	(4,559)

The aforementioned condensed financial information is consolidated financial information of each subsidiary and non-controlling interests include hybrid bonds.

**2. Summary of significant accounting policies**

The Group maintains its official accounting records in Korean won and prepares consolidated financial statements in conformity with the Korean International Financial Reporting Standards (“KIFRS”), in the Korean language. Accordingly, these consolidated financial statements are intended for use by those who are informed about KIFRS and Korean practices. The accompanying consolidated 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 consolidated financial statements, but not required for a fair presentation of the consolidated financial position, comprehensive income, changes in shareholders’ equity or cash flows of the Group, is not presented in the accompanying consolidated financial statements.

The accompanying consolidated 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 financial statements and has been made at the rate of ₩1,157.80 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, 2019. 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 Group has prepared the consolidated financial statements in accordance with KIFRS.

The significant accounting policies used for the preparation of the accompanying consolidated financial statements as of and for the year ended December 31, 2019, are the same as the accounting policies adopted for the preparation of consolidated financial statements as of and for the year ended December 31, 2018, except for adoption of new and revised KIFRSs applied in the current period, which are summarized below.

The accompanying consolidated 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 consolidated financial statements were approved at the Company's Board of Directors meeting on February 7, 2020.

The principal accounting policies are set out below:

### **2.1.1 New and revised KIFRSs adopted in the current period**

The Group has applied amendments to KIFRS issued that are mandatorily effective for accounting periods beginning on or after January 1, 2019.

#### **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 recognized 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 recognized in other comprehensive income. The amendments do not have a material impact on the financial position or management performance of the Group.

#### **KIFRS 1023 - *Borrowing Costs (Amendment)***

The amendments clarify that an entity treats as part of general borrowings any borrowing originally made to develop a qualifying asset when substantially all of the activities necessary to prepare that asset for its intended use or sale are complete. An entity applies those amendments to borrowing costs incurred on or after the beginning of the annual reporting period in which the entity first applies those amendments. An entity applies those amendments for annual reporting periods beginning on or after January 1, 2019, with early application permitted. Since the Group's current practice is in line with these amendments, the Group does not expect any effect on its consolidated financial statements.

### 2.1.1 New and revised KIFRSs adopted in the current period (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, recognized as adjustments to the net investment in the associate or joint venture that arise from applying KIFRS 1028 Investments in Associates and Joint Ventures. The amendments do not have any impact on the Group's financial position or management performance.

#### **KIFRS 1109 – *Financial Instruments (Amendment)***

The amendments clarify that financial assets with prepayment features with negative compensation can be measured at amortized cost, and the effect of modification should be recognized in profit or loss if financial liabilities at amortized costs is modified in respect to conditions but not derecognized. The amendments do not have a material impact on the financial position or management performance of the Group.

#### **KIFRS 1116 – *Leases (Amendment)***

KIFRS 1116 *Leases* 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 standard sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for most leases under a single on-balance sheet model.

Lessor accounting under KIFRS 1116 is substantially unchanged from KIFRS 1017. Lessors will continue to classify leases as either operating or finance leases using similar principles as in KIFRS 1017. Therefore, KIFRS 1116 did not have an impact for leases where the Group is the lessor.

In relation to sale and leaseback transactions, a seller-lessee shall apply the requirements for determining when a performance obligation is satisfied in KIFRS 1115 to determine whether the transfer of an asset is accounted for as a sale of that asset. However, the Group shall not reassess sale and leaseback transactions entered into before the date of initial application.

The Group has applied KIFRS 1116 initially on January 1, 2019 by using the modified retrospective approach. Therefore, the cumulative effect of adopting KIFRS 1116 has recognized as an adjustment to the opening balance of retained earnings as of January 1, 2019 with no restatement of comparative information.

The Group elected to use the transition practical expedient allowing the standard to be applied only to contracts that were previously identified as leases applying KIFRS 1017 and KIFRS 2104 at the date of initial application. The Group also elected to use the recognition exemptions for lease contracts that, at the commencement date, have a lease term of 12 months or less and do not contain a purchase option ('short-term leases'), and lease contracts for which the underlying asset is of low value ('low-value assets').

**2.1.1 New and revised KIFRSs adopted in the current period (cont'd)**

The impacts on the consolidated financial statements from the initial adoption of KIFRS 1116 as of January 1, 2019 are as follows (Korean won in millions):

	<u>Adjustment</u>
<b>Assets:</b>	
Lease receivables	₩ 152,567
Property, plant and equipment	(2,957)
Right-of-use assets	4,060,026
Intangible assets	(3,485)
Prepaid expenses and others	(663,240)
	<u>₩ 3,542,911</u>
<b>Liabilities:</b>	
Lease liabilities	₩ 3,584,003
Other payables and others	(23,671)
	<u>₩ 3,560,332</u>
<b>Equity:</b>	
Owners of the parent	₩ (1,226)
Non-controlling interests	(16,915)
	<u>₩ (17,421)</u>

The lease liabilities as of January 1, 2019 can be reconciled to the operating lease commitments as of December 31, 2019 as follow (Korean won in millions):

	<u>Adjustment</u>
Finance lease liabilities as of December 31, 2018	₩ 21,394
Adjustments to operating lease commitments as of January 1, 2019	
Operating lease commitments as of December 31, 2018	₩ 4,118,917
Discount on operating lease commitments as of January 1, 2019	(272,495)
(Adjustment) application of recognition exemption for short-term leases and leases of low-value assets	(262,419)
Lease liabilities on January 1, 2019	<u>₩ 3,605,397</u>

① Effects of initial adoption of KIFRS 1116

The Group has lease contracts for various items of land and buildings, tanks, vehicles and so forth.

Before the adoption of KIFRS 1116, the Group classified each of its leases (as lessee) at the inception date as either a finance lease or an operating lease. A lease was classified as a finance lease if it transferred substantially all of the risks and rewards incidental to ownership of the leased asset to the Group; otherwise it was classified as an operating lease.

Finance leases were capitalized at the commencement of the lease at the inception date fair value of the leased property or, if lower, at the present value of the minimum lease payments. Lease payments were apportioned between finance costs and reduction of the lease liability.

### **2.1.1 New and revised KIFRSs adopted in the current period (cont'd)**

In an operating lease, the leased property was not capitalized and the lease payments were recognized as an expense in profit or loss on a straight-line basis over the lease term. Any prepaid rent and accrued rent were recognized under advanced payments and other payables, respectively. Upon adoption of KIFRS 1116, the Group applied a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The standard provides specific transition requirements and practical expedients, which has been applied by the Group.

#### **a. Leases previously classified as finance leases**

The Group did not change the initial carrying amounts of recognized assets and liabilities at the date of initial application for leases previously classified as finance leases (i.e., the right-of-use assets and lease liabilities equal the lease assets and liabilities recognized under KIFRS 1017). The requirements of KIFRS 1116 was applied to these leases from January 1, 2019.

#### **b. Leases previously accounted for as operating leases**

The Group recognized right-of-use assets and lease liabilities for those leases previously classified as operating leases, except for short-term leases and leases of low-value assets. The right-of-use assets for most leases were recognized based on the amount equal to the lease liabilities. In some leases, the right-of-use assets were recognized based on the amount equal to the lease liabilities, adjusted for any related prepaid and accrued lease payments previously recognized. Lease liabilities were recognized based on the present value of the remaining lease payments, discounted using the incremental borrowing rate at the date of initial application.

The Group applied the available practical expedients wherein it:

- Used a single discount rate to a portfolio of leases with reasonably similar characteristics
- Relied on its assessment of whether leases are onerous immediately before the date of initial application
- Applied the short-term leases exemptions to leases with lease term that ends within 12 months at the date of initial application
- Excluded the initial direct costs from the measurement of the right-of-use asset at the date of initial application
- Used hindsight in determining the lease term where the contract contains options to extend or terminate the lease

The incremental borrowing interest rate used to measure the lease liabilities of ₩3,584,003 million as of January 1, 2019 is 1.73% to 5.13%.

### **② Summary of new accounting policies**

Set out below are the new accounting policies of the Group upon adoption of KIFRS 1116, which have been applied from the date of initial application:

#### **a. Right-of-use assets**

The Group recognizes right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any re-measurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Unless the Group is reasonably certain to obtain ownership of the leased asset at the end of the lease term, the recognized right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term. Right-of-use assets are subject to impairment.

### **2.1.1 New and revised KIFRSs adopted in the current period (cont'd)**

#### **b. Lease liabilities**

At the commencement date of the lease, the Group recognizes lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating a lease, if the lease term reflects the Group exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognized as expense in the period on which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the in-substance fixed lease payments or a change in the assessment to purchase the underlying asset.

#### **c. Short-term leases and leases of low-value assets**

The Group applies the short-term lease recognition exemption to its short-term leases of buildings, vehicles, and so forth (i.e., those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases of office equipment that are considered of low value (i.e., below \$5,000). Lease payments on short-term leases and leases of low-value assets are recognized as expense on a straight-line basis over the lease term.

#### **d. Significant judgment in determining the lease term of contracts with renewal options**

The Group determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised. The Group applies judgment in evaluating whether it is reasonably certain to exercise the option to renew. That is, it considers all relevant factors that create an economic incentive for it to exercise the renewal. After the commencement date, the Group reassesses the lease term if there is a significant event or change in circumstances that is within its control and affects its ability to exercise (or not to exercise) the option to renew (e.g., a change in business strategy).

### **IFRIC 2123 Interpretation *Uncertainty over Income Tax Treatment (Amendment)***

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 Group 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 amendments do not have a material impact on the financial position or management performance of the Group.

### **2.1.2 New and revised KIFRS issued, but not yet effective**

#### **KIFRS 1001 and KIFRS 1008 - Definition of Material (Amendments)**

In October 2018, the KASB issued amendments to KIFRS 1001 *Presentation of Financial Statements* and KIFRS 1008 *Accounting Policies, Changes in Accounting Estimates and Errors* to align the definition of 'material' across the standards and to clarify certain aspects of the definition. The new definition states that, 'Information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity.'. The Group plans to apply the standard for annual reporting period beginning on or after January 1, 2020, with early application permitted. In addition, the amendments to the definition of material is not expected to have a significant impact on the Group's consolidated financial statements.

#### **KIFRS 1103 - Definition of a Business (Amendment)**

In October 2018, the KASB issued amendments to the definition of a business in KIFRS 1103 *Business Combinations* to help entities determine whether an acquired set of activities and assets is a business or not. They clarify the minimum requirements for a business, remove the assessment of whether market participants are capable of replacing any missing elements, add guidance to help entities assess whether an acquired process is substantive, narrow the definitions of a business and of outputs, and introduce an optional fair value concentration test. The Group plans to apply the standard for annual reporting period beginning on or after January 1, 2020, with early application permitted. In addition, the amendments to the standard is not expected to have a significant impact on the Group's consolidated financial statements.

## **2.2 Basis of consolidation**

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company and its subsidiaries. Control is achieved where the Company 1) has the power over the investee, 2) is exposed, or has rights, to variable returns from its involvement with the investee, and 3) has the ability to use its power to affect its returns. The Company reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

When the Company has less than a majority of the voting rights of an investee, it has power over the investee when the voting rights are sufficient to give it the practical ability to direct the activities of the investee unilaterally. The Company considers all relevant facts and circumstances in assessing whether or not the Company's voting rights in an investee are sufficient to give it power, including:

- The size of the Company's holding of voting rights relative to the size and dispersion of holdings of the other vote holders;
- Potential voting rights held by the Company, other vote holders or other parties;
- Rights arising from other contractual arrangements; and
- Any additional facts and circumstances that indicate that the Company has, or does not have, the current ability to direct the relevant activities at the time that decisions need to be made, including voting patterns at previous stockholders' meetings

Income and expenses of subsidiaries acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the date the Company gains control until the date when the Company ceases to control the subsidiary. Profit or loss and each component of OCI are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.



## **2.2 Basis of consolidation (cont'd)**

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group's accounting policies.

All intragroup transactions and related assets and liabilities, income and expenses are eliminated in full on consolidation.

Changes in the Group's ownership interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Group's interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to owners of the Company.

When the Group loses control of a subsidiary, a gain or loss on disposal is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the previous carrying amount of the assets (including goodwill), and liabilities of the subsidiary and any non-controlling interests. When assets of the subsidiary are carried at revalued amounts or fair values and the related cumulative gain or loss has been recognized in OCI and accumulated in equity, the amounts previously recognized in OCI and accumulated in equity are accounted for as if the Company had directly disposed of the relevant assets (i.e., reclassified to profit or loss or transferred directly to retained earnings).

## **2.3 Business combinations**

Business 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 Group, liabilities incurred by the Group to the former owners of the acquiree and the equity interests issued by the Group 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 Group 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.

In a business combination achieved in stages, the Group remeasures its entire previously held interests in the acquiree at fair value, and any gain or loss from the remeasurement is recognized in profit or loss or, if appropriate, in other comprehensive income. Changes in the carrying amount of previously held interests in the acquiree that are recognized in other comprehensive income is recognized in the same manner as if those interests were disposed of directly.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group 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.

## **2.4 Foreign currencies**

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

In preparing the consolidated 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 terms of historical cost in a foreign currency are not retranslated.

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,
- Exchange differences on transactions entered into in order to hedge certain foreign currency risks, and
- Exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur (therefore forming part of the net investment in the foreign operation), which are recognized initially in OCI and reclassified from equity to profit or loss on disposal or partial disposal of the net investment

For the purpose of presenting the consolidated financial statements, the assets and liabilities of the Group's foreign operations are expressed in Korean won using exchange rates prevailing at the end of the reporting period. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuated significantly during that period, in which case the exchange rates at the dates of the transactions are used. Exchange differences arising, if any, are recognized in OCI and accumulated in equity. On the disposal of a foreign operation, all of the accumulated exchange differences in respect of that operation attributable to the owners of the Group are reclassified to profit or loss.

## **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**

The Group classifies its financial assets in the following measurement categories:

- Financial assets measured at fair value through profit or loss (FVTPL)
- Financial assets measured at fair value through other comprehensive income (FVOCI), and
- Financial assets measured at amortized cost

The classification depends on the Group'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 Group 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 Group 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**

Financial assets are initially measured at fair value, and transaction costs that are directly attributable to the acquisition of financial assets (other than financial assets at fair value through profit or loss) are added to the fair value of the financial assets, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets at fair value through profit or loss are recognized immediately in profit or loss.

The Group considers the hybrid contract which contains embedded derivatives as the entire hybrid contract for the purpose of assessing whether the contractual cashflows represent solely payments of principal and interest on the principal amount outstanding.

#### **(1) Debt instruments**

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the asset. The Group 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.

## **2.6.2 Measurement (cont'd)**

### 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 costs' and impairment losses are presented in 'finance costs'.

### 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 comprehensive income within 'finance income or costs' in the year in which it arises.

### (2) Equity instruments

The Group subsequently measures all equity investments at fair value. Where the Group'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 Group 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 Group applies the simplified approach, which requires expected lifetime credit losses to be recognized from initial recognition of the receivables.

## **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 Group 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 Group has transferred substantially all the risks and rewards of ownership.

If a transfer does not result in derecognition because the Group has retained substantially all the risks and rewards of ownership of the transferred asset, the Group 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 Group or the counterparty.

### **2.7 Inventories**

Inventories are measured at the lower of cost and net realizable value. Cost of inventories, except for materials in in-transit and work in progress (specific identification), are measured under the gross average method, moving average method or first-in first-out method and consists of the purchase price, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Net realizable value represents the estimated selling price for inventories, less all estimated costs of completion and costs necessary to make the sale.

When inventories are sold, the carrying amount of those inventories is recognized as an expense (cost of sales) in the period in which the related revenue is recognized. The amount of any write-down of inventories to net realizable value and all losses of inventories are recognized as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realizable value, is recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs.

### **2.8 Investments in associates and joint ventures**

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but is not control or joint control over those policies.

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

The results and assets and liabilities of associates or joint ventures are incorporated in these consolidated financial statements using the equity method of accounting, except when the investment is classified as held for sale, in which case it is accounted for in accordance with KIFRS 1105, *Non-current Assets Held for Sale and Discontinued Operations*. Under the equity method, an investment in an associate or a joint venture is initially recognized in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Group's share of the profit or loss and OCI of the associate or joint venture. When the Group's share of losses of an associate or a joint venture exceeds the Group's interest in that associate or joint venture (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate or joint venture), the Group discontinues recognizing its share of further losses. Additional losses are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture.

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities of an associate or a joint venture recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment.

When the Group transacts with its associate or a joint venture, profits and losses resulting from the transactions with the associate or joint venture are recognized in the Group's consolidated financial statements only to the extent of interests in the associate or joint venture that are not related to the Group.

## **2.8 Investments in associates and joint ventures (cont'd)**

In 2014, the Group changed its method of application for using the nominal equity ownership to the effective equity ownership when accounting for investor's share of the profit or loss and changes in net assets under the equity method investments in associates and joint ventures. As a result of a regulatory inspection of the Group's business report and the consolidated financial statements in connection with such change in the accounting treatment, the equity method applied by using the nominal equity ownership from 2011 to 2013 was noted as an error in the application of the equity method. However, the Group retrospectively reflected the impact of such change in accounting treatment by restating its comparative consolidated financial statements for the prior periods, and there was no impact on the Group's consolidated financial statements for the years after 2014.

## **2.9 Interests in joint operations**

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

The Group accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the KIFRSs applicable to the particular assets, liabilities, revenues and expenses.

When a group entity transacts with a joint operation in which a group entity is a joint operator (such as a sale or contribution of assets), the Group is considered to be conducting the transaction with the other parties to the joint operation, and gains and losses resulting from the transactions are recognized in the Group's consolidated financial statements only to the extent of other parties' interests in the joint operation.

When a group entity transacts with a joint operation in which a group entity is a joint operator (such as a purchase of assets), the Group does not recognize its share of the gains and losses until it resells those assets to a third party.

## **2.10 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 Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

The Group 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	10 ~ 60	Machinery and equipment	3 ~ 40
Structures	4 ~ 50	Vehicles	1 ~ 20
Ships and vessels	6 ~ 25	Others	2 ~ 40

The Group 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.

## **2.10 Property, plant and equipment (cont'd)**

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.

## **2.11 Goodwill**

Goodwill resulting from an acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment losses, if any.

For the purpose of impairment testing, goodwill is allocated to each of the Group's cash-generating units that is expected to benefit from the synergies of the combination.

A cash-generating unit ("CGU") to which goodwill has been allocated is tested for impairment annually, or more frequently when there is indication that the unit may be impaired. If the recoverable amount of the CGU is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit on a pro-rata basis based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognized directly in profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent periods.

## **2.12 Intangible assets**

Intangible assets are measured initially at cost and, subsequently, are carried at cost, less accumulated amortization and accumulated impairment losses. The cost of intangible asset acquired in a business combination, separately from goodwill, is its fair value at the acquisition date and shall be carried at its cost less any accumulated amortization and any accumulated impairment losses.

Amortization of development cost, industrial property rights and other intangible assets is calculated on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use. The residual value is zero. Development cost for petroleum resource is amortized by the unit of production method based on the amount of proved reserves. However, intangible assets with indefinite useful lives such as membership and brand -related assets are not amortized as there is no foreseeable limit to the period over which the asset is expected to use.

<u>Description</u>	<u>Useful lives (years)</u>	<u>Description</u>	<u>Useful lives (years)</u>
Development costs	3 ~ 10	Developed technology	5 ~ 14
Customer-related assets	3 ~ 25	Others	3 ~ 50

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. 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.

### **2.12.1 Development cost for petroleum resource**

The Group accounts for expenditures with high probability of future economic benefits related to the acquisition costs of assets, exploration and evaluation, and development activities as intangible assets.

Expenditures for exploration and evaluation of oil and natural gas are related to geographical, geological, geochemical, geophysical research, and prospect for commercialization. Development expenditures are related to the construction of various production equipment and drilling oil wells. Impairment testing is performed when the carrying amount of the intangible asset exceeds the estimated recoverable amounts.

Oil-producing fields refer to those which acquired the permission of development for reserves with economic benefits. The cost of an item of oil-producing fields includes the costs directly attributable to its purchase, construction, other expenditures for production, and the estimated costs of provision for restoration. The Group amortizes oil-producing fields by the unit of production method based on the amount of proved reserves.

### **2.12.2 Research and development**

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 Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

### **2.12.3 Subsequent expenditures**

Subsequent expenditures are capitalized only when they increase the future economic benefits embodied in the specific asset to which they relate. All other expenditures, including expenditures on internally generated goodwill and brands, are recognized in profit or loss as incurred.

## **2.13 Impairment of tangible and intangible assets other than goodwill**

At the end of each reporting period, the Group 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 Group estimates the recoverable amount of the 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 and 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.



## **2.14 Investment properties**

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 Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

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

<u>Description</u>	<u>Useful lives (years)</u>	<u>Description</u>	<u>Useful lives (years)</u>
Buildings	10 ~ 60	Structures	4 ~ 50

The Group 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.

## **2.15 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.

## **2.16 Government grants**

Government grants are not recognized until there is reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants related to assets are presented in the statement of financial position by deducting the grant from the carrying amount of the asset. The related grant is recognized in profit or loss over the life of a depreciable asset as a reduced depreciation expense.

Government grants related to income are recognized in profit or loss on a systematic basis over the periods in which the Group recognizes as expenses the related costs for which the grants are intended to compensate. Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognized in profit or loss in the period in which they become receivable.

## **2.17 Non-current assets held for sale**

The Group 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 non-current 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.

## **2.17 Non-current assets held for sale (cont'd)**

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 30. All other notes to the financial statements include amounts for continuing operations, unless otherwise mentioned.

## **2.18 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.

## **2.19 Leases**

At inception of a contract, the Group assesses whether the contract is, or contains, a lease considering if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

### **2.19.1 The Group as a lessee**

The Group applied a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Group recognizes a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments.

#### **(1) Right-of use assets**

The Group recognizes right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any re-measurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received.

### 2.19.1 The Group as a lessee (cont'd)

Depreciation of right-of-use asset is computed using the straight-line method based on the shorter of the lease term and the estimated useful lives of the assets as follows:

Description	Useful lives (years)	Description	Useful lives (years)
Land and buildings	1 ~ 60	Tank	1 ~ 10
Ships and vessels	10 ~ 20	Vehicles	1 ~ 5
Others	1 ~ 10		

Unless the Group is reasonably certain to obtain ownership of the leased asset at the end of the lease term, the recognized right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term. Right-of-use assets are subject to impairment.

#### (2) Lease liabilities

At the commencement date of the lease, the Group recognizes lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating a lease, if the lease term reflects the Group exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognized as expense in the period on which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the in-substance fixed lease payments or a change in the assessment to purchase the underlying asset.

The Group included lease liabilities as financial liabilities.

#### (3) Short-term lease and leases of low-value assets

The Group applies the short-term lease recognition exemption to its short-term leases of land, buildings, vehicles and others (i.e., those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases of office equipment that are considered of low value (i.e., below \$5,000). Lease payments on short-term leases and leases of low-value assets are recognized as expense on a straight-line basis over the lease term.

### 2.19.2 The Group as a lessor

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.

Amounts due from lessees under finance leases are recognized as receivables at the amount of the Group's net investment in the leases. Finance lease income is using the effective interest rate method on the Group's net investment outstanding in respect of the leases.

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized on a straight-line basis over the lease term.

## **2.20 Financial liabilities and equity instruments**

### **2.20.1 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.

### **2.20.2 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 Group are recognized as the proceeds are received, net of direct issue costs.

Repurchase of the Group'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 Group's own equity instruments.

### **2.20.3 Compound instruments**

The component parts of compound instruments (convertible bonds) issued by the Group 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 Group'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 or expiration 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.

### **2.20.4 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 Group, are measured in accordance with the specific accounting policies set out below.

#### **2.20.4.1 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 Group 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

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 Group '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 KIFRS 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 Group that are designated by the Group as at FVTPL are recognized in profit or loss.

#### **2.20.4.2 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.

### **2.20.5 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 KIFRS 1109 (see financial assets above); and
- The amount recognized initially less, where appropriate, cumulative amortization recognized in accordance with the revenue recognition policies set out above

### **2.20.6 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.

### **2.21 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 consolidated 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 Group 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.

### **2.22 Share-based payment arrangements**

Equity-settled share-based payments to employees and others providing similar services are measured at the fair value of the equity instruments at the grant date.

The fair value determined at the grant date of the equity-settled share-based payments is expensed on a straight-line basis over the vesting period, based on the Group's estimate of equity instruments that will eventually vest. At the end of each reporting period, the Group revises its estimate of the number of equity instruments expected to vest. The impact of the revision of the original estimates, if any, is recognized in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment in other component of equity as the equity-settled employee benefits reserve.

## **2.22 Share-based payment arrangements (cont'd)**

Equity-settled share-based payment transactions with parties other than employees are measured at the fair value of the goods or services received, except where that fair value cannot be estimated reliably, in which case they are measured at the fair value of the equity instruments granted, measured at the date the entity obtains the goods or the counterparty renders the service.

For cash-settled share-based payments, a liability is recognized for the goods or services acquired, measured initially at the fair value of the liability. At the end of each reporting period until the liability is settled, and at the date of settlement, the fair value of the liability is remeasured, with any changes in fair value recognized in profit or loss for the year.

## **2.23 Provision**

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group 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.

### **2.23.1 Provision for warranties**

A provision for warranties is recognized when the underlying products or services are sold. The provision is based on historical warranty data and a weighting of all possible outcomes against their associated probabilities.

### **2.23.2 Provision for installment of handset subsidies**

The Group provides lump-sum handset subsidies to customers who agree to use the Group's service for a predetermined service period and the subsidies are charged to commission expense as the related payments are made. When customers agree to use the Group's service for a predetermined service period and purchase handsets on an installment basis, the subsidies are paid every month over the installment period and the Group estimates a provision for handset subsidies to be paid, which is recognized as commissions expense at the time telecommunication service contracts are made.

### **2.23.3 Provision for service/construction warranties**

If the Group has an obligation to repair the product after selling the product or providing the service, the Group estimates the warranty expense based on the repair period and the past experience rate.

### **2.23.4 Provision for restoration**

Provision for restoration of contaminated area is recognized in the related costs in accordance with published environmental policy and appropriate legal requirements of the Group.

### **2.23.5 Provision for onerous contracts**

A provision for onerous contracts is recognized when the expected benefits to be derived by the Group from a contract are lower than the unavoidable costs of meeting its obligations under the contract. The provision is measured at the present value of the lower of the expected cost of terminating the contract and the expected net cost of continuing with the contract. Before a provision is established, the Group recognizes any impairment loss on the assets associated with that contract.

### **2.23.6 Greenhouse gas emissions**

The Group classifies the emission allowances that it receives from the government free of charge as intangible assets, measures them at nil ("0"), and measures any purchased emission allowances at cost. A liability (emission obligation) is measured at nil ("0") only where the allocated emission allowances by the government free of charge are enough to settle the obligation arisen from actual emissions. However, if actual emissions exceed the allocated emission allowances, the amount recognized as a liability is the best estimate of expenditures, as of the end of a reporting period, in performing emission obligations exceeding the above emission allowances.

A provision shall be used only for expenditures for which the provision was originally recognized.

## **2.24 Derivative financial instruments**

The Group enters into foreign exchange forward contracts, interest swaps, currency swaps, and so forth to manage its exposure to foreign exchange rate risk and foreign currency risk. Derivatives are initially recognized at fair value at the date the derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately, unless the derivative is designated and effective as a hedging instrument, in such case the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

### **2.24.1 Embedded derivatives**

An embedded derivative is a component of a hybrid contract that also includes a non-derivative host – with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative.

Derivatives embedded in hybrid contracts with a financial asset host within the scope of KIFRS 1109 are not separated. The entire hybrid contract is classified and subsequently measured as either amortized cost or fair value as appropriate.

Derivatives embedded in hybrid contracts with hosts that are not financial assets within the scope of KIFRS 1109 (e.g. financial liabilities) are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL.

### **2.24.2 Hedge accounting**

The Group designates certain derivatives as hedging instruments in respect of foreign currency risk and interest rate risk in fair value hedges, cash flow hedges, or hedges of net investments in foreign operations. Hedges of foreign exchange risk on firm commitments are accounted for as cash flow hedges.

At the inception of the hedge relationship, the Group documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions.



### **2.24.2 Hedge accounting (cont'd)**

Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge effectiveness requirements:

- There is an economic relationship between the hedged item and the hedging instrument;
- The effect of credit risk does not dominate the value changes that result from that economic relationship; and
- The hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the Group actually uses to hedge that quantity of hedged item

### **2.24.3 Fair value hedges**

The fair value change on qualifying hedging instruments is recognized in profit or loss except when the hedging instrument hedges an equity instrument designated at FVOCI in which case it is recognized in other comprehensive income.

The carrying amount of a hedged item not already measured at fair value is adjusted for the fair value change attributable to the hedged risk with a corresponding entry in profit or loss. For debt instruments measured at FVOCI, the carrying amount is not adjusted as it is already at fair value, but the hedging gain or loss is recognized in profit or loss instead of other comprehensive income. When the hedged item is an equity instrument designated at FVOCI, the hedging gain or loss remains in other comprehensive income to match that of the hedging instrument.

Where hedging gains or losses are recognized in profit or loss, they are recognized in the same line as the hedged item.

The Group discontinues hedge accounting only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. The discontinuation is accounted for prospectively. The fair value adjustment to the carrying amount of the hedged item arising from the hedged risk is amortized to profit or loss from that date.

### **2.24.4 Cash flow hedges**

The effective portion of changes in the fair value of derivatives and other qualifying hedging instruments that are designated and qualify as cash flow hedges is recognized in other comprehensive income limited to the cumulative change in fair value of the hedged item from inception of the hedge. The gain or loss relating to the ineffective portion is recognized immediately in profit or loss.

The Group discontinues hedge accounting only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. The discontinuation is accounted for prospectively. Any gain or loss recognized in other comprehensive income and accumulated in cash flow hedge reserve at that time remains in equity and is reclassified to profit or loss when the forecast transaction occurs. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in cash flow hedge reserve is reclassified immediately to profit or loss.

## **2.25 Revenue recognition**

The Group has applied KIFRS 1115 *Revenue from Contracts with Customers*. The Group operates oil refining, telecommunications, wholesale and retail businesses, chemical products, and construction. When control of a good or service is transferred to the customer, the Group recognizes revenue considering the variable consideration, such as return and discount, from the fair value of the consideration to which it expects to be entitled in exchange for the good or service.

### **2.25.1 Sale of goods**

Revenue from the sale of goods is generally recognized at the time when control of the goods is transferred to the customer, i.e. at the time of delivery of the goods.

### **2.25.2 Rendering of services**

The Group provides services such as construction contracts and system construction services. For construction contracts and system construction services, revenue is recognized over time at the rate of progress under the input method because the Group has no alternative use for completing the obligation for the assets created by the Group that have completed the performance so far, and because the Group has a enforceable right to payment for the completed performance.

In the case of providing other services, the Group 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.

### **2.25.3 Commissions**

When the Group acts in the capacity of an agent rather than as the principal in a transaction, the revenue recognized is the net amount of commission made by the Group.

### **2.25.4 Rental income and others**

Rental income from investment property is recognized in profit or loss on a straight-line basis over the term of the lease. Lease incentives granted are recognized as an integral part of the total rental income, over the term of the lease. Rental income from subleased property is recognized as other income.

### **2.25.5 Contract assets and liabilities**

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

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

## **2.26 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.

### **2.26.1 Current tax**

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit as reported in the consolidated 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 Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

### **2.26.2 Deferred tax**

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated 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.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates and interests in joint ventures, except where the Group 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 Group 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 Group 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.

### **2.26.3 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.

## **2.27 Earnings per share**

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

## **2.28 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 Group 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 consolidated 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 1116 *Leases*; and measurements that have some similarities to fair value, but are not fair value, such as net realizable 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

## **3. Significant accounting judgments, estimates and assumptions**

When preparing the consolidated 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 Group assesses at each reporting date, whether there is an indication of impairment of its non-financial 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 consolidated statements of financial position cannot be derived from active markets, the Group 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 Group estimates a bad debt allowance for trade receivables, loans and other receivables, based on the aging of 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 Group acquires property, plant 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 Group's defined benefit liabilities is determined based on the actuarial valuation carried out at the end of each annual reporting period. Actuarial assumptions are the Group'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 Group's future performance.

## **4. Operating segments**

### **(1) Overview of operating segments**

The Group makes decisions on resources to be allocated to business segments and divides the business segments based on the internal reports which the chief operating decision maker periodically reviews to evaluate the performances of the sales segments. Details of segment operations of each segment are as follows:

Operating segments	Business
SK Innovation Co., Ltd.	Refining, chemical, and resources development
SK Telecom Co., Ltd.	Telecommunication and security service
SK Networks Co., Ltd.	Information communication, rental and trade
SKC Co., Ltd.	Chemical, film, and information communication
SK E&S Co., Ltd.	Gas and energy
SK Engineering & Construction Co., Ltd.	Civil engineering, housing, plant and others
Others	IT services, special gas manufacturing and sale, medicine and life science and others

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**4. Operating segments (cont'd)**

(2) Details of financial information for each operating segment as of and for the years ended December 31, 2019 and 2018 are as follows (Korean won in billions):

	As of and for the year ended December 31, 2019								
	SK Innovation Co., Ltd.	SK Telecom Co., Ltd.	SK Networks Co., Ltd.	SKC Co., Ltd.	SK E&S Co., Ltd.	SK Engineering & Construction Co., Ltd.	Others	Consolidation adjustments (*1)	Total
Total sales	₩ 49,877	₩ 17,744	₩ 13,054	₩ 2,540	₩ 6,562	₩ 8,955	₩ 7,540	₩ (7,007)	₩ 99,265
Internal sales	(997)	(193)	(1,706)	(318)	(79)	(1,211)	(2,503)	7,007	-
Net sales	48,880	17,551	11,348	2,222	6,483	7,744	5,037	-	99,265
Profit (loss) from continuing operations before income tax expense	376	1,163	2	73	1,033	251	2,167	(2,288)	2,777
Profit (loss) for the year from continuing operations	66	862	(29)	67	697	204	1,917	(2,083)	1,701
Total assets	39,526	44,612	10,139	3,973	10,919	5,653	38,024	(20,825)	132,021
Total liabilities	21,316	21,788	7,834	2,247	6,581	4,733	13,744	1,595	79,838
Depreciation	1,083	2,970	820	134	416	84	508	(34)	5,981
Amortization	125	966	18	9	4	6	50	354	1,532

	As of and for the year ended December 31, 2018								
	SK Innovation Co., Ltd.	SK Telecom Co., Ltd.	SK Networks Co., Ltd.	SKC Co., Ltd.	SK E&S Co., Ltd.	SK Engineering & Construction Co., Ltd.	Others	Consolidation adjustments (*1)	Total
Total sales	₩ 54,511	₩ 16,874	₩ 12,646	₩ 2,768	₩ 6,468	₩ 7,503	₩ 6,638	₩ (7,246)	₩ 100,162
Internal sales	(1,850)	(89)	(2,054)	(424)	(69)	(799)	(1,961)	7,246	-
Net sales	52,661	16,785	10,592	2,344	6,399	6,704	4,677	-	100,162
Profit (loss) from continuing operations before income tax expense	2,402	3,976	90	182	558	161	2,254	(2,065)	7,558
Profit (loss) for the year from continuing operations	1,697	3,132	48	141	439	62	2,005	(1,898)	5,626
Total assets	36,085	42,369	7,769	3,833	9,570	5,266	33,144	(18,579)	119,457
Total liabilities	16,757	20,020	5,457	2,138	5,894	4,478	11,980	1,845	68,569
Depreciation	846	2,451	228	119	359	27	1,188	(680)	4,538
Amortization	93	833	13	8	4	5	130	247	1,333

(\*1) Consolidation adjustments of the parent company, excluding consolidation adjustments of each subsidiary.

(3) Details of financial information by geographical location as of and for the years ended December 31, 2019 and 2018 are as follows (Korean won in billions):

	As of and for the year ended December 31, 2019						
	Korea	Asia	Europe	North America	South America	Others	Consolidation adjustments
Total sales	₩ 123,379	₩ 31,895	₩ 5,715	₩ 6,349	₩ 87	₩ (68,160)	₩ 99,265
Operating profit (loss)	6,966	197	71	(40)	25	(3,269)	3,950
Profit (loss) from continuing operations before income tax expense	7,179	415	69	(940)	(96)	(3,850)	2,777
Profit (loss) for the year	5,813	368	62	(922)	(9)	(3,611)	1,701
Total assets	149,085	13,172	2,909	9,539	1,291	(43,975)	132,021
Total liabilities	74,456	4,411	1,132	2,751	191	(3,103)	79,838

	As of and for the year ended December 31, 2018							
	Korea	Asia	Europe	North America	South America	Others	Consolidation adjustments	Total
Total sales	₩ 128,136	₩ 36,913	₩ 7,719	₩ 2,565	₩ -	₩ 82	₩ (75,253)	₩ 100,162
Operating profit (loss)	7,897	230	27	(30)	-	29	(3,469)	4,684
Profit (loss) from continuing operations before income tax expense	8,281	480	(7)	(115)	-	(103)	(978)	7,558
Profit (loss) for the year	6,495	451	(17)	(117)	-	(504)	(682)	5,626
Total assets	138,289	10,019	2,530	7,997	360	1,283	(41,021)	119,457
Total liabilities	64,397	3,354	1,480	2,344	318	154	(3,478)	68,569

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**4. Operating segments (cont'd)**

(4) Details of financial information by revenue from contracts with customers for the years ended December 31, 2019 and 2018 are as follows (Korean won in billions):

	For the year ended December 31, 2019								
	SK Innovation	SK Telecom	SK Networks	SKC	SK E&S	SK Engineering & Construction	Others	Consolidation adjustments	Total
	Co., Ltd.	Co., Ltd.	Co., Ltd.	Co., Ltd.	Co., Ltd.	Co., Ltd.			
1. Total sales	₩ 49,877	₩ 17,744	₩ 13,054	₩ 2,540	₩ 6,562	₩ 8,955	₩ 7,540	₩ (7,007)	₩ 99,265
2. Revenue from contracts with customers	49,847	17,744	11,579	2,540	6,557	8,937	7,458	(5,533)	99,129
Categories:									
Service sales	157	15,629	450	89	-	8,907	3,662	(2,465)	26,429
Finished goods sales	48,837	44	686	1,934	2,827	-	2,335	(1,282)	55,381
Merchandise sales	185	1,628	10,440	477	3,603	30	580	(1,717)	15,226
Other sales	668	443	3	40	127	-	881	(69)	2,093
	<u>49,847</u>	<u>17,744</u>	<u>11,579</u>	<u>2,540</u>	<u>6,557</u>	<u>8,937</u>	<u>7,458</u>	<u>(5,533)</u>	<u>99,129</u>
Timing of revenue recognition:									
Recognition at a point in time	49,690	2,115	11,129	2,451	889	30	3,796	(3,068)	67,032
Recognition over a period of time	157	15,629	450	89	5,668	8,907	3,662	(2,465)	32,097
	<u>49,847</u>	<u>17,744</u>	<u>11,579</u>	<u>2,540</u>	<u>6,557</u>	<u>8,937</u>	<u>7,458</u>	<u>(5,533)</u>	<u>99,129</u>
3. Revenue from other sources	30	-	1,475	-	5	18	82	(1,474)	136
	For the year ended December 31, 2018								
	SK Innovation	SK Telecom	SK Networks	SKC	SK E&S	SK Engineering & Construction	Others	Consolidation adjustments	Total
	Co., Ltd.	Co., Ltd.	Co., Ltd.	Co., Ltd.	Co., Ltd.	Co., Ltd.			
1. Total sales	₩ 54,511	₩ 16,874	₩ 12,646	₩ 2,768	₩ 6,468	₩ 7,503	₩ 6,638	₩ (7,246)	₩ 100,162
2. Revenue from contracts with customers	54,477	16,872	11,701	2,768	6,460	7,489	5,702	(6,360)	99,109
Categories:									
Service sales	186	15,392	464	94	-	7,473	2,034	(1,407)	24,236
Finished goods sales	52,669	32	508	2,069	2,884	-	2,612	(2,721)	58,053
Merchandise sales	189	1,448	10,724	543	3,504	16	947	(2,115)	15,256
Other sales	1,433	-	5	62	72	-	109	(117)	1,564
	<u>54,477</u>	<u>16,872</u>	<u>11,701</u>	<u>2,768</u>	<u>6,460</u>	<u>7,489</u>	<u>5,702</u>	<u>(6,360)</u>	<u>99,109</u>
Timing of revenue recognition:									
Recognition at a point in time	54,291	1,480	11,237	2,674	138	16	3,668	729	74,233
Recognition over a period of time	186	15,392	464	94	6,322	7,473	2,034	(7,089)	24,876
	<u>54,477</u>	<u>16,872</u>	<u>11,701</u>	<u>2,768</u>	<u>6,460</u>	<u>7,489</u>	<u>5,702</u>	<u>(6,360)</u>	<u>99,109</u>
3. Revenue from other sources	34	2	945	-	8	14	936	(886)	1,053

## **5. Acquisitions and disposals of subsidiaries and non-controlling interests**

### **5.1 Acquisitions of significant subsidiaries**

Acquisitions of significant subsidiaries during the current reporting period are as follows:

1) Acquisition of shares of SK Rent-a-Car Co., Ltd. (formely, AJ Rent a Car Co., Ltd.)  
SK Networks Co., Ltd., a subsidiary, acquired 9,353,660 shares (equity ownership of 42.24%) of SK Rent-a-Car Co., Ltd. (formely, AJ Rent a Car Co., Ltd.)'s ordinary share on January 2, 2019 according to the Board of Directors resolution on September 21, 2018 to enhance competitiveness and accelerate growth of its future mobility business through the reorganization of the rental car industry.

### **5.2 Disposal of investments in subsidiaries**

There are no major disposal of investments in subsidiaries for the year ended December 31, 2019.

### **5.3 Other significant equity transactions**

1) The Company's acquisition of treasury shares

For the year ended December 31, 2019, the Company acquired 3,520,000 treasury shares for ₩907,549 million to enhance shareholder value through stabilizing the share price.

2) SK E&S Co., Ltd.'s disposition of 49% shares in Paju Energy Service Co., Ltd.

SK E&S Co., Ltd., a subsidiary of the Group, disposed of a 49% share in Paju Energy Service Co., Ltd. for ₩885,150 million to Gen Plus B.V. in order to enhance its financial structure. Due to this transaction, the Group's non-controlling interests were increased by ₩375,442 million but there was no change in the scope of consolidation.

3) SK Incheon Petrochemical Co., Ltd.'s issuance of hybrid bonds and repayments and retirement of redeemable convertible preferred shares

SK Incheon Petrochemical Co., Ltd., a subsidiary of the Group, issued hybrid bonds of ₩600,000 million on March 15, 2019. In addition, in accordance with a resolution of the Board of Directors on October 31, 2019, SK Incheon Petrochemical Co., Ltd. acquired 6,826,483 shares of redeemable convertible preferred shares at ₩800,002 million that were issued on July 16, 2013 and retired the entire shares in December 2019.

4) SK Telecom Co., Ltd.'s disposition of treasury shares

SK Telecom Co., Ltd., a subsidiary of the Group, disposed of 1,266,620 treasury shares for ₩300,000 million to Kakao Corp. to strengthen the strategic alliance in ICT business. As a result of this transaction, the Group's effective ownership equity in SK Telecom Co., Ltd. was decreased from 30.09% to 29.57%, and non-controlling interests were increased by ₩324,460 million.

5) SK Investment Vina I Pte. Ltd. and SK Investment Vina II Pte. Ltd.'s capital increase by third-party allotment

SK Investment Vina I Pte. Ltd. and SK Investment Vina II Pte. Ltd., subsidiaries of the Group, have undertaken a capital increase by third-party allotment for the year ended December 31, 2019. As a result of this capital increase, the Company's equity ownerships in SK Investment Vina I Pte. Ltd. and SK Investment Vina II Pte. Ltd. were decreased from 100% to 50%, and the Group's non-controlling interests were increased by ₩859,088 million.

6) Hudson Energy NY III, LLC's capital increase by third-party allotment

Hudson Energy NY III, LLC, subsidiaries of the Group, have undertaken a capital increase by third-party allotment for the year ended December 31, 2019. As a result of this capital increase, the Company's equity ownership in Hudson Energy NY III, LLC was decreased from 100% to 50.5%, and the Group's non-controlling interests were increased by ₩172,980 million.



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**6. Financial instruments**

**6.1 Financial assets**

Details of financial assets as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019				Total
	Financial assets measured at FVTPL	Financial assets measured at FVOCI	Financial assets measured at amortized cost	Financial assets designated as hedging instruments	
<b>Current assets</b>					
Cash and cash equivalents	₩ 994,090	₩ -	₩ 6,987,665	₩ -	₩ 7,981,755
Short-term financial instruments	2,188,983	-	1,505,361	-	3,694,344
Trade receivables (*1)	191,701	-	9,636,242	-	9,827,943
Other receivables	251,919	-	1,660,579	-	1,912,498
Short-term loans	-	-	149,008	-	149,008
Accrued income	-	-	117,056	-	117,056
Short-term investment securities	185,056	-	45	-	185,101
Guarantee deposits	-	-	408,273	-	408,273
Derivative financial assets	45,123	-	-	33,576	78,699
Lease receivables	-	-	28,172	-	28,172
	<u>3,856,872</u>	<u>-</u>	<u>20,492,401</u>	<u>33,576</u>	<u>24,382,849</u>
<b>Non-current assets</b>					
Long-term financial instruments	4,528	-	3,070	-	7,598
Long-term trade receivables	-	-	130,171	-	130,171
Long-term other receivables	289,959	-	64,663	-	354,622
Long-term loans	-	-	698,135	-	698,135
Long-term investment securities	857,761	1,951,482	1,169	-	2,810,412
Guarantee deposits	-	-	595,994	-	595,994
Derivative financial assets	157,659	-	-	144,870	302,529
Lease receivables	-	-	48,750	-	48,750
	<u>1,309,907</u>	<u>1,951,482</u>	<u>1,541,952</u>	<u>144,870</u>	<u>4,948,211</u>
	<u>₩ 5,166,779</u>	<u>₩ 1,951,482</u>	<u>₩ 22,034,353</u>	<u>₩ 178,446</u>	<u>₩ 29,331,060</u>

(\*1) Contract assets (unbilled receivables) amounting to ₩549,385 million as of December 31, 2019 are not included in the financial assets.

**SK Holdings Co., Ltd. and its subsidiaries**  
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**6.1 Financial assets (cont'd)**

	December 31, 2018				
	Financial assets measured at FVTPL	Financial assets measured at FVOCI	Financial assets measured at amortized cost	Financial assets designated as hedging instruments	Total
<b>Current assets</b>					
Cash and cash equivalents	₩ 1,279,887	₩ -	₩ 5,503,148	₩ -	₩ 6,783,035
Short-term financial instruments	2,583,003	-	1,635,104	-	4,218,107
Trade receivables (*1)	284,882	-	9,946,944	-	10,231,826
Other receivables	224,390	-	1,707,945	-	1,932,335
Short-term loans	-	-	97,093	-	97,093
Accrued income	-	-	112,492	-	112,492
Short-term investment securities	197,672	-	45	-	197,717
Guarantee deposits	-	-	246,008	-	246,008
Derivative financial assets	81,899	-	-	25,517	107,416
	<u>4,651,733</u>	<u>-</u>	<u>19,248,779</u>	<u>25,517</u>	<u>23,926,029</u>
<b>Non-current assets</b>					
Long-term financial instruments	-	-	12,549	-	12,549
Long-term trade receivables	-	-	11,373	-	11,373
Long-term other receivables	282,151	-	31,062	-	313,213
Long-term loans	-	-	477,742	-	477,742
Long-term investment securities	688,134	1,528,093	1,174	-	2,217,401
Guarantee deposits	-	-	801,500	-	801,500
Derivative financial assets	24,173	-	-	71,730	95,903
	<u>994,458</u>	<u>1,528,093</u>	<u>1,335,400</u>	<u>71,730</u>	<u>3,929,681</u>
	<u>₩ 5,646,191</u>	<u>₩ 1,528,093</u>	<u>₩ 20,584,179</u>	<u>₩ 97,247</u>	<u>₩ 27,855,710</u>

(\*1) Contract assets (unbilled receivables) amounting to ₩612,298 million as of December 31, 2018 are not included in the financial assets.

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**6.2 Financial liabilities**

Details of financial liabilities as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019			
	Financial liabilities measured at FVTPL	Other financial liabilities	Financial liabilities designated as hedging instruments	Total
<b>Current liabilities:</b>				
Short-term borrowings	₩ -	₩ 5,888,357	₩ -	₩ 5,888,357
Trade payables	-	8,809,856	-	8,809,856
Other payables	41,057	3,920,093	-	3,961,150
Current portion of long-term debt	-	6,029,722	-	6,029,722
Accrued expenses	-	3,320,952	-	3,320,952
Dividends payable	-	1,323	-	1,323
Leasehold deposits received	-	218,090	-	218,090
Derivative financial liabilities	38,178	-	6,409	44,587
Lease liabilities	-	1,172,062	-	1,172,062
Finance guarantee liabilities	-	345	-	345
	<u>79,235</u>	<u>29,360,800</u>	<u>6,409</u>	<u>29,446,444</u>
<b>Non-current liabilities:</b>				
Bonds payable and long-term borrowings	-	32,374,161	-	32,374,161
Long-term trade payables	-	2,391	-	2,391
Long-term other payables	-	1,565,043	-	1,565,043
Leasehold deposits received	-	263,442	-	263,442
Derivative financial liabilities	223,168	-	22,957	246,125
Lease liabilities	-	2,897,181	-	2,897,181
Financial guarantee liabilities	-	15,569	-	15,569
	<u>223,168</u>	<u>37,117,787</u>	<u>22,957</u>	<u>37,363,912</u>
	<u>₩ 302,403</u>	<u>₩ 66,478,587</u>	<u>₩ 29,366</u>	<u>₩ 66,810,356</u>
	December 31, 2018			
	Financial liabilities measured at FVTPL	Other financial liabilities	Financial liabilities designated as hedging instruments	Total
<b>Current liabilities:</b>				
Short-term borrowings	₩ -	₩ 3,426,330	₩ -	₩ 3,426,330
Trade payables	-	9,028,488	-	9,028,488
Other payables	-	3,468,375	-	3,468,375
Current portion of long-term debt	-	5,024,863	-	5,024,863
Accrued expenses	-	3,109,033	-	3,109,033
Dividends payable	-	3,851	-	3,851
Leasehold deposits received	-	127,307	-	127,307
Derivative financial liabilities	62,775	-	6,083	68,858
Finance lease liabilities	-	4,459	-	4,459
Finance guarantee liabilities	-	389	-	389
	<u>62,775</u>	<u>24,193,095</u>	<u>6,083</u>	<u>24,261,953</u>
<b>Non-current liabilities:</b>				
Bonds payable and long-term borrowings	61,813	28,828,720	-	28,890,533
Long-term other payables	-	2,011,424	-	2,011,424
Leasehold deposits received	-	320,354	-	320,354
Derivative financial liabilities	246,798	-	14,912	261,710
Finance lease liabilities	-	16,935	-	16,935
Financial guarantee liabilities	-	15,882	-	15,882
	<u>308,611</u>	<u>31,193,315</u>	<u>14,912</u>	<u>31,516,838</u>
	<u>₩ 371,386</u>	<u>₩ 55,386,410</u>	<u>₩ 20,995</u>	<u>₩ 55,778,791</u>

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**6.3 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, 2019 and 2018 are as follows (Korean won in millions):

	2019						
	Dividends income	Interest income	Interest expense	Gain (loss) on foreign currency	Gain (loss) on derivatives instruments	Others	Total
Financial assets measured at FVTPL	₩ 5,069	₩ 68,007	₩ -	₩ 97,888	₩ 1,555,607	₩ 31,323	₩ 1,757,894
Financial assets measured at FVOCI	18,370	329	-	2	-	(96,675)	(77,974)
Financial assets measured at amortized cost	-	199,739	-	61,235	-	(198,126)	62,848
Financial assets designated as hedging instruments	-	-	-	-	(40,387)	-	(40,387)
Financial liabilities measured at FVTPL	-	-	(43)	(88,791)	(1,627,689)	-	(1,716,523)
Other financial liabilities	-	-	(1,380,307)	(242,999)	-	-	(1,623,306)
Financial liabilities designated as hedging instruments	-	-	-	-	(3,918)	-	(3,918)
	<u>₩ 23,439</u>	<u>₩ 268,075</u>	<u>₩(1,380,350)</u>	<u>₩(172,665)</u>	<u>₩ (116,387)</u>	<u>₩ (263,478)</u>	<u>₩ (1,641,366)</u>
	2018						
	Dividends income	Interest income	Interest expense	Gain (loss) on foreign currency	Gain (loss) on derivatives instruments	Others	Total
Financial assets measured at FVTPL	₩ 5,813	₩ 57,634	₩ -	₩ -	₩ 366,423	₩ 68,368	₩ 498,238
Financial assets measured at FVOCI	26,877	1,854	-	(25)	-	(202,834)	(174,128)
Financial assets measured at amortized cost	-	172,499	-	118,698	-	(154,832)	136,365
Financial assets designated as hedging instruments	-	-	-	-	(48,423)	-	(48,423)
Financial liabilities measured at FVTPL	-	-	-	(32,676)	(18,096)	-	(50,772)
Other financial liabilities	-	-	(1,019,095)	(277,109)	-	-	(1,296,204)
Financial liabilities designated as hedging instruments	-	-	-	-	18,096	-	18,096
	<u>₩ 32,690</u>	<u>₩ 231,987</u>	<u>₩(1,019,095)</u>	<u>₩ (191,112)</u>	<u>₩ 318,000</u>	<u>₩ (289,298)</u>	<u>₩ (916,828)</u>

**6.4 Fair values of financial instruments by hierarchy level**

1) Fair values and book values of financial instruments as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019		December 31, 2018	
	Book value	Fair value	Book value	Fair value
Bonds payable	₩ 29,530,202	₩ 30,228,914	₩ 25,820,473	₩ 25,132,494
Borrowings	14,762,038	15,850,637	11,521,253	12,209,764

The fair value of bonds payable and borrowings was measured as the present value of the contractually determined stream of future cash flows discounted at the market interest rate (1.53% ~ 3.60%) regarding residual market risks. As the book values of other financial assets and other financial liabilities are reasonable approximations to fair values, the fair values have not been disclosed.

#### 6.4 Fair values of financial instruments by hierarchy level (cont'd)

2) Details of fair values of financial instruments by hierarchy level as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets measured at FVTPL	₩ 3,183,073	₩ 1,327,969	₩ 452,955	₩ 4,963,997
Financial assets measured at FVOCI	649,439	-	1,302,043	1,951,482
Derivative financial assets	563	380,665	-	381,228
	<u>₩ 3,833,075</u>	<u>₩ 1,708,634</u>	<u>₩ 1,754,998</u>	<u>₩ 7,296,707</u>
Financial liabilities:				
Financial liabilities measured at FVTPL	₩ -	₩ 41,057	₩ -	₩ 41,057
Derivative financial liabilities	449	67,907	222,356	290,712
	<u>₩ 449</u>	<u>₩ 108,964</u>	<u>₩ 222,356</u>	<u>₩ 331,769</u>
	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets measured at FVTPL	₩ 3,557,954	₩ 1,072,489	₩ 909,676	₩ 5,540,119
Financial assets measured at FVOCI	672,586	24,509	830,998	1,528,093
Derivative financial assets	6,762	196,557	-	203,319
	<u>₩ 4,237,302</u>	<u>₩ 1,293,555</u>	<u>₩ 1,740,674</u>	<u>₩ 7,271,531</u>
Financial liabilities:				
Financial liabilities measured at FVTPL	₩ -	₩ 61,813	₩ -	₩ 61,813
Derivative financial liabilities	-	90,399	240,169	330,568
	<u>₩ -</u>	<u>₩ 152,212</u>	<u>₩ 240,169</u>	<u>₩ 392,381</u>

#### 3) 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 of the end of the current term and the end of the prior term, in which the Group is classified as Level 2 or Level 3 is as follows:

##### A. Currency forward and currency swap

The fair value of the currency forward and the currency swap was measured in principle based on the forward exchange rate disclosed in the market as of 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 and the currency swap 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 and the currency swap was determined using the yield curve derived from the rate quoted in the market as of the end of the current term.

##### B. Commodity swap

In principle, the fair value of the commodity swap was measured on the basis of the spot transaction price disclosed in the market as of the end of the current term for the period consistent with the remaining period of the spot swap being measured. In addition, the discount rate used to measure the fair value of the spot swap was determined using the yield curve derived from the rate quoted in the market as of the end of the reporting period.

#### **6.4 Fair values of financial instruments by hierarchy level (cont'd)**

##### **C. Interest rate swap**

The fair value of the interest rate swap was measured in principle based on the interest rate swap rate disclosed in the market as of the end of the current term for the period consistent with the remaining period of the interest rate swap. If the interest rate swap for a period consistent with the remaining period of the interest rate swap is not disclosed in the market, the interest rate swap rate was measured by estimating the interest rate swap rate for a period similar to the remaining period of the interest rate swap by applying interpolation to each period.

##### **D. 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.

##### **E. 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 Group 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.

##### **F. Convertible debt securities**

The fair value of convertible debt securities was measured by adding the fair value of the ordinary bond component that does not include conversion rights and the fair value of the conversion right, which is an embedded derivative (purchase call option). The fair value of the non-convertible general bond component was measured by discounting the future cash flows of the bond using the market interest rate applied to entities with similar creditworthiness as the issuer of the convertible bond, and the fair value of the conversion right was measured using an option pricing model. Stock price volatility, a significant input used to measure the fair value of conversion rights, was estimated based on past stock price changes. The consolidation entity considered that the fair value of the right to convert was a significant proportion of the total fair value of the convertible debt securities and classified the fair value measurement of the entire convertible debt securities into Level 3 of the fair value hierarchy.

##### **G. Contingent consideration**

The fair value of the contingent consideration is estimated by the net profit before subtracting interest and corporate tax by scenarios, and based on these estimates, the Group measures the present value of the expected future receivables weighted on the probability of each scenario.

##### **H. Total return swap agreement**

The fair value of the total return swap agreement 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.

#### 6.4 Fair values of financial instruments by hierarchy level (cont'd)

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

	Valuation amount		Valuation techniques	Level 3 inputs	Input variations
	Assets	Liabilities			
SK Shipping Co., Ltd.	₩	225,081	DCF model	Permanent growth rate WACC	0.0% ~ 2.0% 7.7%
Total return swap agreement	₩	222,356	Monte-Carlo simulation	Term structure of interest rate WACC	1.6% ~ 1.9% 7.7%

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.

#### 7. Trade receivables

(1) Details of trade receivables as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019		December 31, 2018	
	Current	Non-current	Current	Non-current
Trade receivables:				
Trade receivables (*1)	₩ 10,504,422	₩ 138,068	₩ 10,831,643	₩ 13,727
Contract assets (unbilled receivables)	549,385	-	612,298	-
Loss allowance:				
Trade receivables	(676,479)	(7,897)	(599,817)	(2,354)
	<u>₩ 10,377,328</u>	<u>₩ 130,171</u>	<u>₩ 10,844,124</u>	<u>₩ 11,373</u>

(\*1) Includes the net investment amount of the finance lease provided by the Group as a manufacturer or seller.

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**7. Trade receivables (cont'd)**

(2) Details of contract assets and liabilities related to the contract with the customer as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019		December 31, 2018	
Contract assets: (*1)				
Construction business	₩	403,343	₩	515,483
Telecommunication business		191,858		133,893
Others		146,135		96,814
	₩	<u>741,336</u>	₩	<u>746,190</u>
Contract liabilities: (*2)				
Construction business	₩	1,308,245	₩	1,750,851
Telecommunication business		223,456		183,813
Others		886,096		919,096
	₩	<u>2,417,797</u>	₩	<u>2,853,760</u>

(\*1) Contract assets are included in trade receivables and other assets.

(\*2) Contract liabilities are included in trade payables, advances received and other liabilities. The amount recognized as revenue in the current period in relation to the contract liabilities in the end of the prior period is ₩1,799,478 million, and there is no revenue recognized in the current period in relation to the performance obligation satisfied in the prior period.

(3) Details of construction profit variation by changes of accounting estimates related to construction contracts as of December 31, 2019 are as follows (Korean won in millions):

	December 31, 2019				
	Change in estimated construction revenue	Change in estimated cost	Impact on current period loss	Impact on future period profit	Change in unbilled (overbilled) receivables
SK Engineering & Construction Co., Ltd. and its subsidiaries	₩ 937,558	₩ 998,694	₩ (138,842)	₩ 77,706	₩ (138,842)
Others	2,706	5,275	(2,124)	(445)	(2,124)
	<u>₩ 940,264</u>	<u>₩ 1,003,969</u>	<u>₩ (140,966)</u>	<u>₩ 77,261</u>	<u>₩ (140,966)</u>

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

(4) Details of the construction contracts where the contract revenue exceeds 5% of the preceding year's revenue under the percentage-of-completion method as of December 31, 2019 are as follows (Korean won in millions):

Subsidiary	Project	Contract date	Completion date	Percentage (%)	Unbilled receivables		Trade receivables (*1)	
					Amount	Impairment	Amount	Loss allowance
SK Engineering & Construction Co., Ltd.	RRE Project	2009.12	2016.05	99.9	₩ -	₩ -	₩ -	₩ -
	Goseong High Fire power Construction	2014.07	2021.07	68.6	-	-	-	-

(\*1) It refers to amounts of billed receivables.

(5) The amount includes the carrying amount of trade receivables accounted for as secured borrowings (₩396,851 million as of December 31, 2019 and ₩539,977 million as of December 31, 2018) when financial assets were transferred by trade receivables factoring and asset securitization, but are not derecognized, in entirety or in part.



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**8. Inventories**

Details of inventories as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019			December 31, 2018		
	Cost	Valuation allowance	Book value	Cost	Valuation allowance	Book value
Merchandise	₩ 926,141	₩ (39,343)	₩ 886,798	₩ 1,246,748	₩ (25,208)	₩ 1,221,540
Finished goods	2,392,621	(68,544)	2,324,077	2,439,524	(173,148)	2,266,376
Semifinished goods and work in progress	1,108,743	(54,792)	1,053,951	1,054,235	(106,597)	947,638
Raw materials and sub-materials	2,030,535	(31,042)	1,999,493	2,050,836	(80,340)	1,970,496
Materials in transit	2,356,402	-	2,356,402	2,267,490	-	2,267,490
Supplies	322,035	(3,957)	318,078	229,050	(3,909)	225,141
Uncompleted contracts	189,428	-	189,428	80,574	-	80,574
Others	10,436	(302)	10,134	13,621	(136)	13,485
	<u>₩ 9,336,341</u>	<u>₩ (197,980)</u>	<u>₩ 9,138,361</u>	<u>₩ 9,382,078</u>	<u>₩ (389,338)</u>	<u>₩ 8,992,740</u>

**9. Investment securities**

Details of investment securities as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019			
	Financial assets measured at FVTPL	Financial assets measured at FVOCI (*1)	Financial assets measured at amortized cost	Total
Equity instruments:				
Marketable equity instruments	₩ -	₩ 649,439	₩ -	₩ 649,439
Non-marketable equity instruments	2,009	1,277,996	-	1,280,005
	<u>2,009</u>	<u>1,927,435</u>	<u>-</u>	<u>1,929,444</u>
Bond instruments:				
Beneficiary securities and others	598,306	715	-	599,021
Debt securities	442,502	23,332	1,214	467,048
	<u>1,040,808</u>	<u>24,047</u>	<u>1,214</u>	<u>1,066,069</u>
	<u>₩ 1,042,817</u>	<u>₩ 1,951,482</u>	<u>₩ 1,214</u>	<u>₩ 2,995,513</u>
Current investment securities	₩ 185,056	₩ -	₩ 45	₩ 185,101
Non-current investment securities	857,761	1,951,482	1,169	2,810,412
	December 31, 2018			
	Financial assets measured at FVTPL	Financial assets measured at FVOCI (*1)	Financial assets measured at amortized cost	Total
Equity instruments:				
Marketable equity instruments	₩ -	₩ 672,586	₩ -	₩ 672,586
Non-marketable equity instruments	35,471	828,156	-	863,627
	<u>35,471</u>	<u>1,500,742</u>	<u>-</u>	<u>1,536,213</u>
Bond instruments:				
Beneficiary securities and others	683,862	663	-	684,525
Debt securities	166,473	26,688	1,219	194,380
	<u>850,335</u>	<u>27,351</u>	<u>1,219</u>	<u>878,905</u>
	<u>₩ 885,806</u>	<u>₩ 1,528,093</u>	<u>₩ 1,219</u>	<u>₩ 2,415,118</u>
Current investment securities	₩ 197,672	₩ -	₩ 45	₩ 197,717
Non-current investment securities	688,134	1,528,093	1,174	2,217,401

(\*1) The Group has 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, as items measured at FVOCI.

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**10. Investments in associates and joint ventures**

(1) Investments in associates and joint ventures

Details of investments in associates and joint ventures as of December 31, 2019 and 2018 are as follows (Korean won in millions):

Company	Domicile	Equity ownership (*1)	December 31, 2019		December 31, 2018
			Acquisition cost	Book value	Book value
<b>Associates:</b>					
SK Hynix Inc.	Korea	20.1%	₩ 5,420,310	₩ 11,028,722	₩ 10,922,882
China Gas Holdings Ltd. (*2)	Hong Kong	11.7%	1,178,637	1,548,020	1,814,603
Vingroup Joint Stock Company (*2)	Vietnam	6.1%	1,165,399	1,172,259	-
Masan Group Corporation (*2)	Vietnam	9.5%	559,050	483,950	559,050
ESR Cayman Limited (*2)	Cayman Islands	12.5%	493,627	684,714	616,364
Eureka Midstream Holdings	USA	40.0%	465,582	487,160	469,202
FR BR Aggregator	USA	39.0%	350,718	331,310	-
Peru LNG Company, LLC	USA	20.0%	331,144	286,727	293,027
Daehan Oil Pipeline Corporation	Korea	41.0%	311,372	341,754	339,664
Shenzhen Londian Electrics Co., Ltd.	China	26.0%	284,602	294,126	-
NHIP II Bison Holdings, LLC	USA	24.5%	297,511	343,985	279,525
Hana Card Co., Ltd. (*2)	Korea	15.0%	253,707	294,756	288,457
Yemen LNG Company Ltd. (*2, 3)	Yemen	6.9%	252,813	-	-
Beijing BESK Technology Co., Ltd.	China	49.0%	247,427	233,244	143,198
Korea IT Fund (*4)	Korea	63.3%	242,170	311,553	281,684
Joyvio (*2)	China	14.0%	213,793	212,353	-
Best Oil Company Limited	Myanmar	35.0%	154,732	153,524	-
Canakkale Highway And Bridge	Turkey	25.0%	153,346	140,849	80,270
Others				<u>1,074,246</u>	<u>844,268</u>
				<u>19,423,252</u>	<u>16,932,194</u>
<b>Joint ventures (*5):</b>					
Sinopec-SK (Wuhan) Petrochemical Co., Ltd.	China	35.0%	676,332	1,003,159	775,577
Mitsui Chemicals & SKC Polyurethanes Co., Ltd.	Korea	50.0%	349,942	455,225	481,199
Hana Land Chip PEF 33 (*4)	Korea	65.2%	196,001	264,395	263,792
Eurasia Tunnel	Turkey	50.0%	112,726	250,963	226,198
Boryeong LNG Terminal Co., Ltd.	Korea	50.0%	133,323	152,812	117,543
SABIC SK Nexlene Company Pte. Ltd.	Singapore	50.0%	112,670	81,182	88,680
Others				<u>263,728</u>	<u>333,162</u>
				<u>2,471,464</u>	<u>2,286,151</u>
				<u>₩21,894,716</u>	<u>₩ 19,218,345</u>

(\*1) Equity ownership includes indirect investments held by the consolidated subsidiaries.

(\*2) The Group retains significant influence on the associate despite having less than 20% equity interests.

(\*3) Impairment losses on investments in associates were fully recognized as there was an indication of impairment prior to the current period.

(\*4) These companies were not included as consolidated subsidiaries as the Group does not have control over more than half of the voting rights by agreements.

(\*5) All joint arrangements that the Group has joint control over are structured by a consolidated entity. The parties that have joint control with respect to the joint agreements hold the rights to the net assets of the agreements and accordingly, they are classified as joint ventures and accounted for using the equity method of accounting.

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**10. Investments in associates and joint ventures (cont'd)**

(2) Changes in carrying amount of investments in associates and joint ventures

Changes in investments in associates and joint ventures accounted for using the equity method for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	2019							Ending balance
	Beginning balance	Acquisitions	Disposals	Equity profit or losses on investments	Other capital movements	Dividends received	Others (*1)	
Associates:								
SK Hynix Inc.	₩ 10,922,882	₩ -	₩ -	₩ 304,998	₩ 20,008	₩(219,150)	₩ (16)	₩ 11,028,722
China Gas Holdings Ltd.	1,814,603	-	(418,585)	171,218	31,623	(50,839)	-	1,548,020
Vingroup Joint Stock Compan	-	1,165,399	-	14,808	-	-	(7,948)	1,172,259
Masan Group Corporation	559,050	-	-	7,732	-	-	(82,832)	483,950
ESR Cayman Limited	616,364	-	-	10,412	57,938	-	-	684,714
Eureka Midstream Holdings	469,202	-	-	14,750	-	(13,988)	17,196	487,160
FR BR Aggregator	-	350,718	-	(17,162)	-	-	(2,246)	331,310
Peru LNG Company, LLC	293,027	-	-	(16,824)	10,524	-	-	286,727
Daehan Oil Pipeline Corporation	339,664	-	-	6,258	213	(4,381)	-	341,754
Shenzhen Lonian Electrics Co., Ltd.	-	284,602	-	11,518	-	-	(1,994)	294,126
NHIP II Bison Holdings, LLC	279,525	22,436	-	(133)	-	-	42,157	343,985
Hana Card Co., Ltd.	288,457	-	-	6,827	(528)	-	-	294,756
Beijing BESK Technology Co., Ltd.	143,198	93,110	-	(3,473)	409	-	-	233,244
Korea IT Fund	281,684	-	-	34,116	3,884	(8,131)	-	311,553
Joyvio	-	213,793	-	-	-	-	(1,440)	212,353
Best Oil Company Limited	-	154,732	-	-	-	-	(1,208)	153,524
Canakkale Highway And Bridge	80,270	56,826	-	18,296	(14,543)	-	-	140,849
Others	<u>844,268</u>	<u>370,420</u>	<u>(47,553)</u>	<u>(43,883)</u>	<u>32,811</u>	<u>(41,878)</u>	<u>(39,939)</u>	<u>1,074,246</u>
	<u>16,932,194</u>	<u>2,712,036</u>	<u>(466,138)</u>	<u>519,458</u>	<u>142,339</u>	<u>(338,367)</u>	<u>(78,270)</u>	<u>19,423,252</u>
Joint ventures:								
Sinopec-SK (Wuhan) Petrochemical Co., Ltd.	775,577	187,523	-	29,434	10,713	-	(88)	1,003,159
Mitsui Chemicals & SKC Polyurethanes Co., Ltd.	481,199	-	-	(9,952)	5,804	(13,721)	(8,105)	455,225
Hana land chip PEF 33	263,792	-	-	16,245	-	(15,642)	-	264,395
Eurasia Tunnel	226,198	-	-	29,046	(12,500)	-	8,219	250,963
Boryeong LNG Terminal Co., Ltd.	117,543	25,000	-	10,392	(123)	-	-	152,812
SABIC SK Nexlene Company Pte. Ltd.	88,680	-	-	(2,924)	(4,574)	-	-	81,182
Others	<u>333,162</u>	<u>-</u>	<u>-</u>	<u>4,282</u>	<u>-</u>	<u>(6,589)</u>	<u>(67,127)</u>	<u>263,728</u>
	<u>2,286,151</u>	<u>212,523</u>	<u>-</u>	<u>76,523</u>	<u>(680)</u>	<u>(35,952)</u>	<u>(67,101)</u>	<u>2,471,464</u>
	<u>₩19,218,345</u>	<u>₩2,924,559</u>	<u>₩(466,138)</u>	<u>₩ 595,981</u>	<u>₩ 141,659</u>	<u>₩(374,319)</u>	<u>₩(145,371)</u>	<u>₩21,894,716</u>

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**10. Investments in associates and joint ventures (cont'd)**

	2018							
	Beginning balance	Acquisitions	Disposals	Equity profit or losses on investments	Other capital movements	Dividends received	Others (*1)	Ending balance
<b>Associates:</b>								
SK Hynix Inc.	₩ 7,976,784	₩ -	₩ -	₩ 3,105,837	₩ (13,639)	₩(146,100)	₩ -	₩ 10,922,882
China Gas Holdings Ltd.	1,687,587	-	-	149,705	1,342	(39,160)	15,129	1,814,603
ESR Cayman Limited	382,040	115,200	-	72,734	75,409	-	(29,019)	616,364
Eureka Midstream Holdings	434,164	-	-	17,211	-	-	17,827	469,202
Daehan Oil Pipeline Corporation	334,331	-	-	10,662	(533)	(4,796)	-	339,664
Peru LNG Company, LLC	274,738	-	-	(26,526)	44,815	-	-	293,027
Hana Card Co., Ltd.	280,988	-	-	14,581	(7,112)	-	-	288,457
Korea IT Fund	257,003	-	-	38,099	(9,919)	(3,499)	-	281,684
NHIP II Bison Holdings, LLC	-	275,075	-	-	-	-	4,450	279,525
Beijing BESK Technology Co., Ltd.	28,487	118,758	-	(2,728)	(1,319)	-	-	143,198
Xe-Pian Xe-Namnoy Power	53,159	13,205	-	18,762	3,109	-	-	88,235
Canakkale Highway And Bridge	22,160	73,507	-	4,472	(21,917)	-	2,048	80,270
Socar, Inc.	82,720	-	-	(11,402)	501	-	7,963	79,782
SM Core, Inc.	75,500	-	-	(570)	(18)	(266)	-	74,646
NanoEnTek, Inc.	61,861	3,180	-	(116)	(808)	-	-	64,117
SM Culture & contents	64,965	-	-	(909)	(255)	-	-	63,801
Korea Ras Laffan LNG Limited	58,081	-	-	8,377	3,457	(8,396)	-	61,519
Rails International LLC	-	58,085	-	-	-	-	940	59,025
TSK Water Co., Ltd.	61,926	-	(27,698)	7,317	-	-	(41,545)	-
Others	475,769	173,139	(1,906)	19,290	(5,504)	(24,036)	275,441	912,193
	<u>12,612,263</u>	<u>830,149</u>	<u>(29,604)</u>	<u>3,424,796</u>	<u>67,609</u>	<u>(226,253)</u>	<u>253,234</u>	<u>16,932,194</u>
<b>Joint ventures:</b>								
Sinopec-SK (Wuhan)	681,901	-	-	105,805	(12,129)	-	-	775,577
Petrochemical Co., Ltd.	-	-	-	-	-	-	-	-
Mitsui Chemicals & SKC Polyurethanes Co., Ltd.	430,170	-	-	48,944	4,409	(2,100)	(224)	481,199
Hana land chip PEF 33	221,081	-	-	58,738	-	(16,027)	-	263,792
Eurasia Tunnel	198,645	-	-	18,234	-	-	9,319	226,198
Boryeong LNG Terminal Co., Ltd.	105,117	-	-	12,426	-	-	-	117,543
SKC-Kolon PI Co., Ltd.	94,730	-	-	9,541	-	(6,351)	(271)	97,649
SABIC SK Nexlene Company Pte. Ltd.	91,907	-	-	2,531	(5,758)	-	-	88,680
Others	193,688	15,034	(76)	(15,538)	(3,686)	-	46,091	235,513
	<u>2,017,239</u>	<u>15,034</u>	<u>(76)</u>	<u>240,681</u>	<u>(17,164)</u>	<u>(24,478)</u>	<u>54,915</u>	<u>2,286,151</u>
	<u>₩14,629,502</u>	<u>₩ 845,183</u>	<u>₩ (29,680)</u>	<u>₩ 3,665,477</u>	<u>₩ 50,445</u>	<u>₩(250,731)</u>	<u>₩ 308,149</u>	<u>₩19,218,345</u>

(\*1) Others include the effects of changes in scope of consolidation, net foreign currency differences and others.

(3) Details of unrecognized changes in equity method caused by discontinuing the application of equity method as of December 31, 2019 are as follows (Korean won in millions):

	Beginning balance	Changes	Ending balance
Pentaport Development Co., Ltd.	₩ 71,292	₩ 1,383	₩ 72,675
SK Telesys Corporation	3,960	-	3,960
Korea Consortium Kazakh B.V.	163,488	15,438	178,926
Yemen LNG Company Ltd. and others	36,109	(1,501)	34,608

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**10. Investments in associates and joint ventures (cont'd)**

(4) Details of reconciliation from net assets of investments in associates and joint ventures to book value of investments in associates and joint ventures as of December 31, 2019 are as follows (Korean won in millions):

	December 31, 2019					Book value
	Net assets	Equity ownership	Net assets attributable to the ownership interests	Cost-book value differentials	Intercompany transactions and others	
<b>Associates:</b>						
SK Hynix Inc. (*1)	₩ 47,943,195	20.1%	₩ 10,240,666	₩ 793,489	₩ (5,433)	₩ 11,028,722
China Gas Holdings Ltd.	5,352,443	11.7%	626,236	921,439	345	1,548,020
Vingroup Joint Stock Company	6,030,029	6.1%	370,787	801,472	-	1,172,259
Masan Group Corporation	2,594,420	9.5%	246,470	237,480	-	483,950
ESR Cayman Limited	2,823,752	12.5%	352,969	323,891	7,854	684,714
Eureka Midstream Holdings	551,126	40.0%	220,450	292,354	(25,644)	487,160
FR BR Aggregator	845,314	39.0%	329,433	-	1,877	331,310
Daehan Oil Pipeline Corporation	797,188	41.0%	326,847	22,878	(7,971)	341,754
Peru LNG Company, LLC	1,434,171	20.0%	286,833	-	(106)	286,727
Shenzhen Londian Electrics Co., Ltd.	532,771	26.0%	138,520	155,606	-	294,126
NHIP II Bison Holdings, LLC	1,387,111	24.5%	339,565	-	4,420	343,985
Hana Card Co., Ltd.	1,628,184	15.0%	244,228	50,528	-	294,756
Beijing BESK Technology Co., Ltd.	473,379	49.0%	231,955	1,289	-	233,244
Korea IT Fund	491,924	63.3%	311,535	-	18	311,553
Canakkale Highway And Bridge	563,398	25.0%	140,849	-	-	140,849
<b>Joint ventures:</b>						
Sinopec-SK (Wuhan) Petrochemical Co., Ltd.	2,781,713	35.0%	973,600	29,583	(24)	1,003,159
Mitsui Chemicals & SKC Polyurethanes Co., Ltd.	987,212	50.0%	493,606	-	(38,381)	455,225
Hana land chip PEF 33	404,858	65.2%	264,008	13,638	(13,251)	264,395
Eurasia Tunnel	485,124	50.0%	242,562	16,808	(8,407)	250,963
Boryeong LNG Terminal Co., Ltd.	272,131	50.0%	136,066	28,736	(11,990)	152,812
Sabic SK Nexlene Company Pte. Ltd.	248,540	50.0%	124,270	-	(43,088)	81,182

(\*1) The equity ownership presented is the ownership in respect to the number of shares issued by the investee, and the effective equity ratio of 21.36% was applied to the equity method valuation.

**SK Holdings Co., Ltd. and its subsidiaries**  
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**10. Investments in associates and joint ventures (cont'd)**

(5) Condensed financial informations of significant investments in associates and joint ventures as of December 31, 2019 are as follows (Korean won in millions).

As of and for the year ended December 31, 2019							
	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Sales	Net income (loss)	Total comprehensive income (loss)
<b>Associates:</b>							
SK Hynix Inc.	₩ 14,457,602	₩ 50,331,892	₩ 7,874,033	₩ 8,972,266	₩ 26,990,733	₩ 2,016,391	₩ 2,110,414
China Gas Holdings Ltd.	6,076,590	10,474,371	6,929,771	3,417,927	8,518,562	1,431,605	1,151,215
Vingroup Joint Stock Company	10,074,674	10,353,960	9,180,788	5,217,816	6,565,646	386,635	386,635
Masan Group Corporation	1,213,095	3,651,768	1,524,610	745,833	1,948,701	319,504	319,504
ESR Cayman Limited	1,460,638	5,423,646	1,258,846	2,801,686	181,565	98,004	98,004
Eureka Midstream Holdings	33,739	897,144	27,927	351,830	128,614	33,803	33,803
FR BR Aggregator	20,383	1,402,824	577,893	-	5,102	(44,040)	(44,040)
Daehan Oil Pipeline Corporation	113,639	964,067	38,253	242,265	172,930	23,874	24,394
Peru LNG Company, LLC	154,792	2,615,933	127,639	1,208,915	580,709	(82,643)	(82,643)
Shenzhen Londian Electrics Co., Ltd.	357,971	595,007	198,853	221,354	409,770	49,916	49,922
NHIP II Bison Holdings, LLC	787	1,386,561	237	-	-	(544)	(544)
Hana Card Co., Ltd.	7,974,407	207,284	1,015,657	5,537,850	1,236,678	56,281	51,823
Beijing BESK Technology Co., Ltd.	253,679	377,650	104,153	53,797	6,453	(7,088)	(7,088)
Korea IT Fund	113,233	378,691	-	-	70,565	53,867	59,999
Canakkale Highway And Bridge	15,207	2,252,413	133,185	1,571,037	967,970	73,183	12,943
<b>Joint ventures:</b>							
Sinopec-SK (Wuhan) Petrochemical Co., Ltd.	884,508	4,390,574	2,492,187	1,182	5,228,647	94,716	94,716
Mitsui Chemicals & SKC Polyurethanes Co., Ltd.	500,034	936,033	344,621	104,234	1,082,754	(14,299)	(68)
Hana land chip PEF 33	8,761	711,692	1,112	314,483	36,057	24,914	24,914
Eurasia Tunnel	159,147	1,426,880	149,926	950,977	15,061	53,763	40,984
Boryeong LNG Terminal Co., Ltd.	198,122	1,294,215	49,619	1,170,587	145,952	25,271	25,226
SABIC SK Nexlene Company Pte. Ltd.	134,276	542,536	69,907	358,365	346,787	(11,013)	(29,903)

**11. Property, plant and equipment**

(1) Details of property, plant and equipment as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019	December 31, 2018
Acquisition cost	₩ 58,269,139	₩ 51,614,987
Accumulated depreciation and accumulated impairment loss	(15,422,760)	(11,899,066)
	₩ 42,846,379	₩ 39,715,921

**SK Holdings Co., Ltd. and its subsidiaries**  
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**December 31, 2019 and 2018**

**11. Property, plant and equipment (cont'd)**

(2) Changes in property, plant and equipment for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the year ended December 31, 2019						Ending balance
	Beginning balance	Business combination	Acquisitions	Disposals	Depreciation	Others (*1)	
Land	₩ 9,627,559	₩ 42,996	₩ 16,598	₩ (87,012)	₩ -	₩ (813,093)	₩ 8,787,048
Buildings	4,043,820	7,642	266,998	(46,939)	(179,706)	179,669	4,271,484
Structures	1,611,612	439	36,727	(25,211)	(112,629)	7,839	1,518,777
Ships and vessels	843	-	-	(1)	(117)	135	860
Machinery and equipment	17,966,522	361	899,162	(147,854)	(3,564,062)	3,445,588	18,599,717
Vehicles	126,601	868	7,369	(1,386)	(20,136)	72,384	185,700
Operating lease asset	697,476	980,437	562,525	(40,981)	(441,277)	(11,824)	1,746,356
Others	3,627,490	1,691	1,658,866	(79,372)	(681,079)	(990,135)	3,537,461
Construction-in-progress	2,013,998	-	5,385,365	(39,728)	-	(3,160,659)	4,198,976
	<u>₩ 39,715,921</u>	<u>₩ 1,034,434</u>	<u>₩ 8,833,610</u>	<u>₩ (468,484)</u>	<u>₩ (4,999,006)</u>	<u>₩ (1,270,096)</u>	<u>₩ 42,846,379</u>

  

	For the year ended December 31, 2018						Ending balance
	Beginning balance	Business combination	Acquisitions	Disposals	Depreciation	Others (*1)	
Land	₩ 9,745,857	₩ 71,759	₩ 55,602	₩ (203,171)	₩ -	₩ (42,488)	₩ 9,627,559
Buildings	3,831,087	62,470	22,218	(133,838)	(176,785)	438,668	4,043,820
Structures	1,571,893	2,704	27,019	(19,187)	(111,180)	140,363	1,611,612
Ships and vessels	2,308,484	-	1,724	(4,882)	(126,015)	(2,178,468)	843
Machinery and equipment	17,166,820	302,028	905,013	(127,337)	(3,322,559)	3,042,557	17,966,522
Vehicles	144,258	575	7,924	(10,740)	(17,150)	1,734	126,601
Operating lease asset	793,584	-	47,964	(24,343)	(178,904)	59,175	697,476
Others	2,959,046	124,327	1,222,012	(22,222)	(597,771)	(57,902)	3,627,490
Construction-in-progress	2,774,423	37,234	4,195,169	(6,848)	-	(4,985,980)	2,013,998
	<u>₩ 41,295,452</u>	<u>₩ 601,097</u>	<u>₩ 6,484,645</u>	<u>₩ (552,568)</u>	<u>₩ (4,530,364)</u>	<u>₩ (3,582,341)</u>	<u>₩ 39,715,921</u>

(\*1) Other changes include exclusion from the scope of consolidation, impairment losses, transfer of construction-in-progress to depreciable assets and investment properties, net translation differences and others.

(3) Capitalized borrowing costs

Capitalized borrowing costs and capitalization rates for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019	December 31, 2018
Property, plant and equipment and intangible assets	₩ 36,872	₩ 26,728
Capitalization rate	2.0% ~ 5.4%	2.6% ~ 5.4%

**12. Right-of-use assets and lease liabilities**

(1) Details of right-of-use assets as of December 31, 2019 are as follows (Korean won in millions):

	December 31, 2019			Book value
	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	
Land and buildings	₩ 2,052,531	₩ (505,453)	₩ (475)	₩ 1,546,603
Tank	326,107	(59,912)	-	266,195
Ships and vessels	1,143,339	(77,811)	-	1,065,528
Vehicles	1,755,554	(332,484)	(78)	1,422,992
Others	324,544	(82,264)	(52)	242,228
	<u>₩ 5,602,075</u>	<u>₩ (1,057,924)</u>	<u>₩ (605)</u>	<u>₩ 4,543,546</u>

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**12. Right-of-use assets and lease liabilities (cont'd)**

(2) Changes in right-of-use assets for the year ended December 31, 2019 are as follows (Korean won in millions):

	For the year ended December 31, 2019							Ending balance
	Beginning balance	Changes in accounting policy	Business combination	Increase	Decrease	Depreciation	Others (*1)	
Land and buildings	₩ -	₩ 1,660,407	₩ 2,029	₩ 630,757	₩ (262,002)	₩ (449,045)	₩ (35,543)	₩ 1,546,603
Tank	-	306,785	-	24,248	(5,402)	(60,389)	953	266,195
Ships and vessels	-	664,330	-	482,111	-	(77,907)	(3,006)	1,065,528
Vehicles	-	1,221,843	70,503	575,793	(143,982)	(279,037)	(22,128)	1,422,992
Others	-	206,661	-	167,862	(21,164)	(108,856)	(2,275)	242,228
	<u>₩ -</u>	<u>₩ 4,060,026</u>	<u>₩ 72,532</u>	<u>₩ 1,880,771</u>	<u>₩ (432,550)</u>	<u>₩ (975,234)</u>	<u>₩ (61,999)</u>	<u>₩ 4,543,546</u>

(\*1) The amounts include net foreign exchange differences and others.

(3) Changes in lease liabilities for the year ended December 31, 2019 are as follows (Korean won in millions):

	For the year ended December 31, 2019							Ending balance	
	Beginning balance	Changes in accounting policy	Business combination	Increase	Interest expenses	Decrease	Transfer		Others (*1)
Lease liabilities	₩ 21,394	₩ 3,584,003	₩ 73,953	₩ 1,752,056	₩ 80,434	₩ (1,285,464)	₩ (154,035)	₩ (3,098)	₩ 4,069,243

(\*1) The amounts include net foreign exchange differences and others.

The Group recognized lease payments of ₩261,075 million in relation to short-term lease, ₩10,951 million in relation to leases of low-value assets, and ₩162,274 million in relation to variable lease payments in cost of sales and selling and administrative expenses during the year ended December 31, 2019. The total cash outflow of leases during the year ended December 31, 2019 is ₩1,632,708 million.

**13. Investment properties**

(1) Details of investment properties as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019	December 31, 2018
Acquisition cost	₩ 605,362	₩ 623,357
Accumulated depreciation and accumulated impairment loss	(117,604)	(119,391)
	<u>₩ 487,758</u>	<u>₩ 503,966</u>



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**13. Investment properties (cont'd)**

(2) Changes in investment properties for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the year ended December 31, 2019					
	Beginning balance	Acquisition	Disposal	Depreciation	Others (*1)	Ending balance
Land	₩ 201,213	₩ 1,126	₩ (14,743)	₩ -	₩ 53,787	₩ 241,383
Buildings	302,125	160	(5,374)	(6,881)	(44,139)	245,891
Structures	628	-	-	(144)	-	484
	<u>₩ 503,966</u>	<u>₩ 1,286</u>	<u>₩ (20,117)</u>	<u>₩ (7,025)</u>	<u>₩ 9,648</u>	<u>₩ 487,758</u>

  

	For the year ended December 31, 2018					
	Beginning balance	Acquisition	Disposal	Depreciation	Others (*1)	Ending balance
Land	₩ 307,436	₩ 213	₩ (101,277)	₩ -	₩ (5,159)	₩ 201,213
Buildings	314,736	535	(4,043)	(7,885)	(1,218)	302,125
Structures	674	-	-	(46)	-	628
	<u>₩ 622,846</u>	<u>₩ 748</u>	<u>₩ (105,320)</u>	<u>₩ (7,931)</u>	<u>₩ (6,377)</u>	<u>₩ 503,966</u>

(\*1) This includes net translation differences, transferred amounts to property, plant and equipment and others.

(3) Details of profit or loss recognized for the year ended December 31, 2019 with regards to investment properties are as follows (Korean won in millions):

	December 31, 2019
Rental revenue	₩ 8,453
Depreciation	(7,025)
	<u>₩ 1,428</u>

The Group does not distinguish operating expenses related to rental revenue.

(4) As of December 31, 2019, the fair value of investment properties is ₩587,425 million.

**14. Goodwill**

(1) Changes in goodwill for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2019	December 31, 2018
Beginning balance	₩ 2,379,526	₩ 857,514
Business combination (*1)	183,520	1,538,585
Others (*2)	35,418	(16,573)
Ending balance	<u>₩ 2,598,464</u>	<u>₩ 2,379,526</u>

(\*1) The amount of business combination consist of goodwill arising from the acquisition of shares in SK Rent-a-Car Co., Ltd. (formely, AJ Rent a Car Co., Ltd.) and Life & Security Holdings Co., Ltd. for the years ended December 31, 2019 and 2018, respectively (see Note 39 Business Combination).

(\*2) Others include net translation differences, transferred amounts to an asset held for sale and others.

#### 14. Goodwill (cont'd)

##### (2) Impairment testing of goodwill

1) Goodwill of each operating segment for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2019	December 31, 2018
SK Holdings Co., Ltd.	₩ 641,122	₩ 616,006
Group of SK Innovation Co., Ltd.	112,040	112,247
Group of SK Telecom Co., Ltd.	1,239,393	1,225,949
Group of SK Networks Co., Ltd.	436,569	253,048
Group of SK Engineering & Construction Co., Ltd.	144,116	144,116
Others	25,224	28,160
	<u>₩ 2,598,464</u>	<u>₩ 2,379,526</u>

As a result of goodwill impairment test, an impairment loss of ₩47,705 million on goodwill of operating segments in SK Innovation Co., Ltd. and SK Telecom Co., Ltd. was recognized for the year ended December 31, 2019 as the carrying amount of goodwill exceeded the estimated recoverable amount.

2) Significant assumptions to estimate the recoverable amounts reflected the management's expectation of future trend considered with external and internal (historical) information.

Significant assumptions used in impairment testing of goodwill for the year ended December 31, 2019 are as follows:

	Recoverable amount	Growth rate (*1)	Discount rate (*2)
SK Holdings Co., Ltd.	Value in use	1.0% ~ 2.0%	12.0% ~ 16.6%
Group of SK Innovation Co., Ltd.	Value in use	0.0% ~ 2.0%	7.7% ~ 11.0%
Group of SK Telecom Co., Ltd.	Value in use	0.01% ~ 1.0%	7.3% ~ 13.6%
Group of SK Networks Co., Ltd.	Value in use	1.0%	9.0%
Group of SK Engineering & Construction Co., Ltd.	Value in use	0.0%	10.0%

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

(\*2) The discount rate used to determine the recoverable amount of each operating segment is based on the weighted-average cost of capital.

#### 15. Intangible assets

(1) Details of intangible assets for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the year ended December 31, 2019						
	Beginning balance	Business combination	Acquisitions	Disposals	Amortization	Others (*2)	Ending balance
Development costs	₩ 122,290	₩ -	₩ 55,105	₩ (587)	₩ (30,332)	₩ 5,348	₩ 151,824
Facility usage rights	53,872	-	2,288	(1,827)	(8,369)	2,336	48,300
Industrial property rights	90,915	12	2,179	(1,556)	(6,013)	(10,878)	74,659
Frequency usage rights	3,139,978	-	-	-	(492,477)	-	2,647,501
Customer-related assets	2,398,689	15,038	250	(367)	(208,608)	16,363	2,221,365
Membership (*1)	229,325	1,511	15,495	(9,061)	-	392	237,662
Development costs for petroleum resource	2,354,708	-	279,526	(33,560)	(100,395)	(1,008,248)	1,492,031
Brand-related assets (*1)	2,223,112	-	-	-	-	373,531	2,596,643
Developed technology	1,086,222	-	-	-	(146,991)	2,303	941,534
Others (*3)	2,112,088	8,797	200,373	(3,144)	(539,297)	(122,550)	1,656,267
	<u>₩ 13,811,199</u>	<u>₩ 25,358</u>	<u>₩ 555,216</u>	<u>₩ (50,102)</u>	<u>₩ (1,532,482)</u>	<u>₩ (741,403)</u>	<u>₩ 12,067,786</u>

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**15. Intangible assets (cont'd)**

	For the year ended December 31, 2018						Ending balance
	Beginning balance	Business combination	Acquisitions	Disposals	Amortization	Others (*2)	
Development costs	₩ 94,548	₩ 244	₩ 50,402	₩ (2,963)	₩ (23,018)	₩ 3,077	₩ 122,290
Facility usage rights	58,391	-	2,239	(50)	(8,723)	2,015	53,872
Industrial property rights	114,868	-	6,855	(1,749)	(8,203)	(20,856)	90,915
Frequency usage rights	2,176,940	-	1,366,926	-	(403,888)	-	3,139,978
Customer-related assets	1,822,290	851,469	213	-	(165,478)	(109,805)	2,398,689
Membership (*1)	226,021	700	21,166	(12,581)	-	(5,981)	229,325
Development costs for petroleum resource	1,768,834	315,782	310,565	-	(72,364)	31,891	2,354,708
Brand-related assets (*1)	2,204,405	392,579	-	-	-	(373,872)	2,223,112
Developed technology	1,175,916	55,877	-	-	(143,412)	(2,159)	1,086,222
Others (*3)	1,831,646	15,050	170,076	(11,240)	(507,745)	614,301	2,112,088
	<u>₩ 11,473,859</u>	<u>₩ 1,631,701</u>	<u>₩ 1,928,442</u>	<u>₩ (28,583)</u>	<u>₩ (1,332,831)</u>	<u>₩ 138,611</u>	<u>₩ 13,811,199</u>

(\*1) Membership and brand-related assets are classified as intangible assets with infinite useful lives and are not amortized.

(\*2) This includes impairment loss, net translation differences, transfer to intangible assets from construction-in-progress and others.

(\*3) This comprises intangible assets recognized through business combination, software, usable and profitable donation assets and others.

(2) Impairment testing of brand-related assets

The Company has estimated the recoverable amount of brand-related assets with indefinite useful lives for the impairment test. Significant assumptions to estimate the recoverable amounts reflected the management's expectation of future trend considered with external and internal (historical) information.

Significant assumptions used in impairment testing of brand-related assets as of December 31, 2019 are as follows:

	<u>Growth rate (*1)</u>	<u>Discount rate (*2)</u>
Value in use	1.00%	8.6% ~ 12.5%

(\*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 goodwill impairment test of brand-related assets, the carrying amount does not exceed the recoverable amount, so there is no impairment loss recognized during the current reporting period.

**16. Borrowings and bonds payable**

(1) Details of borrowings and bonds payable as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019		December 31, 2018	
	Current	Non-current	Current	Non-current
Short-term borrowings (*1)	₩ 5,888,357	₩ -	₩ 3,426,330	₩ -
Bonds and long-term borrowings:				
Bonds payable (*2)	4,393,154	25,137,048	3,889,861	21,930,612
Long-term borrowings	1,636,568	7,237,113	1,135,002	6,959,921
	<u>6,029,722</u>	<u>32,374,161</u>	<u>5,024,863</u>	<u>28,890,533</u>
	<u>₩ 11,918,079</u>	<u>₩ 32,374,161</u>	<u>₩ 8,451,193</u>	<u>₩ 28,890,533</u>

(\*1) It includes borrowings collateralized for trade receivables of ₩396,851 million and ₩539,977 million as of December 31, 2019 and 2018, respectively, which were transferred but not derecognized.

(\*2) As of December 31, 2018, ₩61,813 million of bonds payable are financial liabilities designated at FVTPL.

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**16. Borrowings and bonds payable (cont'd)**

(2) Details of bonds payable as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019	December 31, 2018
SK Holdings Co., Ltd.	₩ 6,330,000	₩ 6,210,000
SK Innovation Co., Ltd.	1,238,900	1,319,050
SK Energy Co., Ltd.	3,100,000	2,380,000
SK Global Chemical Co., Ltd.	1,160,000	910,000
SK Incheon Petrochem Co., Ltd.	1,780,000	1,450,000
SK Lubricants Co., Ltd.	630,000	480,000
SK Telecom Co., Ltd.	6,429,360	5,743,533
SK Broadband Co., Ltd.	1,870,390	1,745,430
Dreamus Company Co., Ltd. (formerly, Iriver Co., Ltd.)	-	5,479
Life & Security Holdings Co., Ltd.	12,514	-
SK Networks Co., Ltd.	1,360,000	1,240,000
SK Magic Co., Ltd.	200,000	110,000
SK Rent-a-Car Co., Ltd. (formely, AJ Rent a Car Co., Ltd.)	470,000	-
SKC Co., Ltd.	780,000	730,000
SKC Solmics Co., Ltd.	43,156	52,362
SK Telesys Co., Ltd.	30,000	30,000
SKC Hightech & Marketing Co., Ltd.	51,261	-
SK E&S Co., Ltd.	640,000	740,000
Paju Energy Service Co., Ltd.	730,000	650,000
Wirye Energy Service Co., Ltd.	385,000	385,000
Narae Energy Service Co., Ltd.	60,000	40,000
SK Engineering & Construction Co., Ltd.	846,000	710,000
SK Materials Co., Ltd.	440,000	340,000
SK Siltron Co., Ltd.	910,000	390,000
	<u>29,433,531</u>	<u>25,660,854</u>
Addition: premium on bonds payable	96,671	159,619
Less: current portion	<u>(4,393,154)</u>	<u>(3,889,861)</u>
	<u>₩ 25,137,048</u>	<u>₩ 21,930,612</u>

(3) Details of long-term borrowings as of December 31, 2019 and 2018 are as follows (Korean won in millions):

Financial institution	Description	Interest rate (%)	December 31, 2019	December 31, 2018
Korea Development Bank and others	General	0.00 ~ 7.20	₩ 3,887,464	₩ 3,216,081
Korea Development Bank and others	Fund for facility	0.00 ~ 5.18	2,345,588	2,523,160
Standed Chartered Bank and others	Foreign borrowings	1.70 ~ 8.00	1,150,492	789,766
Korea Energy Agency (*1)	Fund for mine exploration	0.00 ~ 7.00	77,066	88,278
Econg 1st Co., Ltd. and others	Callable preferred share	4.25 ~ 6.40	200,000	250,000
Korea Development Bank and others	Fund for operation	2.20 ~ 2.78	122,000	149,000
Kookmin Bank and others	Fund for supply pipeline	1.75	8,177	8,544
Shinhan Bank and others	Fund for reasonable energy consumption	1.75 ~ 1.80	4,290	5,267
NH Bank	Fund for safety management	1.75	448	680
Citibank and others (*2)	Takeover	LIBOR(3M) + 1.00	185,248	212,439
MD Prime 1st Co., Ltd. and others	Others	3.07, 3.20	<u>909,976</u>	<u>846,906</u>
			8,890,749	8,090,121
Addition (less): premium (discount)			(17,068)	4,802
Less: current portion			<u>(1,636,568)</u>	<u>(1,135,002)</u>
			<u>₩ 7,237,113</u>	<u>₩ 6,959,921</u>

## 16. Borrowings and bonds payable (cont'd)

- (\*1) As of December 31, 2019, the Group holds a loan amounting to ₩48,090 million from Korea Energy Agency for the purpose of oil exploration and development in which there is no repayment obligation in case for failure in exploration.
- (\*2) SK Global Chemical Co., Ltd., one of the subsidiaries, has a repayment obligation for borrowings of SK Global Chemical Americas, Inc. in the event of default. The purpose of the borrowings of SK Global Chemical Americas, Inc. was to acquire The Dow Chemical Company's EAA business domiciled in the US and Spain and its tangible and intangible assets.

Long-term borrowings presented above are to be repaid either in installments or all at once at maturity. Financial instruments and other assets of the Group are pledged as detailed in Note 35.

## 17. Long-term other payables

Details of long-term other payables as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019			
	Nominal value	Discount on long-term other payables		Long-term other payables
		Current portion		
Frequency usage right	₩ 2,051,389	₩ (78,982)	₩ (423,839)	₩ 1,548,568
Others	16,538	(63)	-	16,475
	<u>₩ 2,067,927</u>	<u>₩ (79,045)</u>	<u>₩ (423,839)</u>	<u>₩ 1,565,043</u>
	December 31, 2018			
	Nominal value	Discount on long-term other payables		Long-term other payables
		Current portion		
Frequency usage right	₩ 2,476,738	₩ (103,874)	₩ (423,884)	₩ 1,948,980
Others	62,971	(168)	(359)	62,444
	<u>₩ 2,539,709</u>	<u>₩ (104,042)</u>	<u>₩ (424,243)</u>	<u>₩ 2,011,424</u>

## 18. Provisions

Changes in the provisions for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the year ended December 31, 2019					
	Beginning balance	Increase	Decrease	Ending balance	Current	Non-current
Provision for sale warranties	₩ 70,379	₩ 21,239	₩ (16,593)	₩ 75,025	₩ 3,662	₩ 71,363
Provision for service / construction warranties	78,468	28,297	(13,731)	93,034	93,034	-
Provision for restoration	127,532	19,175	(8,469)	138,238	54,962	83,276
Provision for onerous contracts	99,476	154,145	(100,764)	152,857	144,704	8,153
Other provisions (*1)	253,307	260,458	(178,220)	335,545	287,731	47,814
	<u>₩ 629,162</u>	<u>₩ 483,314</u>	<u>₩ (317,777)</u>	<u>₩ 794,699</u>	<u>₩ 584,093</u>	<u>₩ 210,606</u>

- (\*1) Other provisions include greenhouse gas emissions provision of ₩76,634 million, and the provision is recognized only when actual emissions exceed the emission rights granted and still held. Permitted greenhouse gas emissions were 12,131,112 KAU, and estimated greenhouse gas emissions were 13,837,779 KAU in 2019.

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**18. Provisions (cont'd)**

	For the year ended December 31, 2018						
	Beginning balance	Business combination	Increase	Decrease	Ending balance	Current	Non-current
Provision for sale warranties	₩ 65,372	₩ -	₩ 8,267	₩ (3,260)	₩ 70,379	₩ 3,525	₩ 66,854
Provision for handset subsidy	3,874	-	-	(3,874)	-	-	-
Provision for service / construction warranties	61,576	-	38,145	(21,253)	78,468	78,468	-
Provision for restoration	114,921	4,944	11,414	(3,747)	127,532	48,652	78,880
Provision for onerous contracts	27,596	-	143,003	(71,123)	99,476	99,476	-
Others (*1)	140,463	89	190,005	(77,250)	253,307	122,104	131,203
	<u>₩ 413,802</u>	<u>₩ 5,033</u>	<u>₩ 390,834</u>	<u>₩ (180,507)</u>	<u>₩ 629,162</u>	<u>₩ 352,225</u>	<u>₩ 276,937</u>

(\*1) Other provisions include greenhouse gas emissions provision of ₩64,757 million, and the provision is recognized only when actual emissions exceed the emission rights granted and still held. Permitted greenhouse gas emissions were 11,871,167 KAU, and estimated greenhouse gas emissions were 13,340,497 KAU in 2018.

**19. Defined benefit liabilities**

(1) Details of defined benefit liabilities as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019	December 31, 2018
Present value of defined benefit obligation	₩ 3,171,225	₩ 2,741,488
Fair value of plan assets (*1)	(2,763,924)	(2,353,187)
Total	<u>₩ 407,301</u>	<u>₩ 388,301</u>

(\*1) The Group has recognized ₩7,381 million and ₩31,926 million as defined benefit assets as of December 31, 2019 and 2018, respectively.

(2) Changes in the defined benefit liabilities for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the year ended December 31, 2019		
	Present value of defined benefit obligation	Fair value of plan assets	Total
Beginning balance	₩ 2,741,488	₩ (2,353,187)	₩ 388,301
Provision for pension benefits:			
Current service cost	401,427	-	401,427
Net interest expense (income)	67,439	(58,059)	9,380
Remeasurement:			
Return on plan assets (excluding amounts included in net interest expense)	-	10,577	10,577
Actuarial changes arising from changes in financial assumptions and others	169,065	-	169,065
Contributions by employer directly to plan assets	-	(553,984)	(553,984)
Benefit paid	(242,104)	211,326	(30,778)
Others	33,910	(20,597)	13,313
Ending balance	<u>₩ 3,171,225</u>	<u>₩ (2,763,924)</u>	<u>₩ 407,301</u>

**19. Defined benefit liabilities (cont'd)**

	<u>For the year ended December 31, 2018</u>		
	Present value of defined		
	benefit obligation	Fair value of plan assets	Total
Beginning balance	₩ 2,260,864	₩ (2,049,033)	₩ 211,831
Business combination	123,943	(28,880)	95,063
Provision for pension benefits:			
Current service cost	361,812	-	361,812
Past service cost	965	-	965
Net interest expense (income)	70,299	(61,785)	8,514
Remeasurement:			
Return on plan assets (excluding amounts included in net interest expenses)	-	30,797	30,797
Actuarial changes arising from changes in financial assumptions and others	150,131	-	150,131
Contributions by employer directly to plan assets	-	(428,883)	(428,883)
Benefit paid	(193,893)	166,068	(27,825)
Others	(32,633)	18,529	(14,104)
Ending balance	<u>₩ 2,741,488</u>	<u>₩ (2,353,187)</u>	<u>₩ 388,301</u>

(3) As of December 31, 2019 and 2018, 61.30% and 55.24% of the plan assets, respectively, consist of cash and cash equivalents and debt instruments.

(4) The principal assumptions used in actuarial calculation as of December 31, 2019 and 2018 are as follows:

	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Discount rate for defined benefit obligation	1.65% ~ 3.70%	2.08% ~ 3.75%
Expected rate of salary increase	1.00% ~ 6.70%	1.50% ~ 5.22%

(5) The sensitivity analysis for significant actuarial assumptions as of December 31, 2019 is as follows (Korean won in millions):

	<u>Impact on the defined benefit liabilities</u>		
	<u>Sensitivity level</u>	<u>Increase</u>	<u>Decrease</u>
Discount rate for defined benefit obligation	0.5% point	₩ (109,318)	₩ 123,310
Expected rate of salary increase	0.5% point	115,953	(104,848)

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.

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**20. Other assets and liabilities**

(1) Details of other assets as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Current assets:		
Short-term loans	₩ 149,008	₩ 97,093
Accrued income	117,056	112,492
Advanced payments	796,264	969,326
Prepaid expenses	2,682,533	2,209,732
Guarantee deposits	408,273	246,008
Derivative financial assets	78,699	107,416
Lease receivables	28,172	-
Other contract assets	127,592	90,154
Others	43,960	40,771
	<u>₩ 4,431,557</u>	<u>₩ 3,872,992</u>
Non-current assets:		
Long-term prepaid expenses	₩ 1,620,172	₩ 1,877,441
Long-term loans	698,135	477,742
Guarantee deposits	595,994	801,500
Derivative financial assets	302,529	95,903
Long-term lease receivables	48,750	-
Other long-term contract assets	64,359	43,821
Defined benefit assets (*1)	7,381	31,926
Others	114,302	122,078
	<u>₩ 3,451,622</u>	<u>₩ 3,450,411</u>

(\*1) The excess amount of certain plans in the Group has not been offset because the amount was not entitled and intended to settle the defined benefit liabilities of other plans (see Note 19).

(2) Details of other liabilities as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Current liabilities:		
Accrued expenses	₩ 3,320,952	₩ 3,109,033
Dividends payable	1,323	3,851
Advances received	2,062,132	2,286,817
Unearned revenue	88,545	67,005
Withholdings	2,159,448	2,075,802
Leasehold deposits received	218,090	127,307
Income tax payable	693,038	676,952
Derivative financial liabilities	44,587	68,858
Lease liabilities	1,172,062	4,459
Finance guarantee liabilities	345	389
Other contract liabilities	238,582	141,338
Others	33,329	42,008
	<u>₩ 10,032,433</u>	<u>₩ 8,603,819</u>
Non-current liabilities:		
Long-term unearned revenue	₩ 508,839	₩ 492,804
Leasehold deposits received	263,442	320,354
Derivative financial liabilities	246,125	261,710
Long-term lease liabilities	2,897,181	16,935
Financial guarantee liabilities	15,569	15,882
Other long-term contract liabilities	32,236	43,107
Others (*1)	251,048	320,322
	<u>₩ 4,214,440</u>	<u>₩ 1,471,114</u>

(\*1) Includes long-term employee benefit liabilities amounting to ₩96,377 million and ₩59,423 million as of December 31, 2019 and 2018, respectively.



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**20. Other assets and liabilities (cont'd)**

(3) Details of incremental costs of obtaining a contract as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019	December 31, 2018
Current incremental costs of obtaining a contract	₩ 1,897,233	₩ 1,606,137
Non-current incremental costs of obtaining a contract	1,152,748	825,222
	<u>₩ 3,049,981</u>	<u>₩ 2,431,359</u>

The Group pays fees to its dealers based on the performance of customer recruitment and contract renewal relating to telecommunication services, etc., and among these fees, costs that would not have been incurred if there were no contracts with the customer is recognized as prepaid expenses. In the prior period, such costs were expensed when incurred. The asset is amortized on a straight-line basis over the estimated contract period with the related customer. On the other hand, the amount of incremental cost of obtaining a contract recognized as an asset which was expensed as commission expense and others in the consolidated statement of comprehensive income for the current period is ₩2,193,333.

**21. Derivative financial assets and liabilities**

(1) Details of derivative financial assets and liabilities as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019		December 31, 2018	
	Current	Non-current	Current	Non-current
Firm contracts	₩ (5,097)	₩ 6,073	₩ 19,249	₩ 4,640
Swap contracts	31,373	(68,039)	10,527	(181,955)
Forward contracts	(1,103)	7,906	415	(5,895)
Futures contracts	6,819	(449)	8,367	306
Options contracts	2,120	110,913	-	17,097
	<u>₩ 34,112</u>	<u>₩ 56,404</u>	<u>₩ 38,558</u>	<u>₩ (165,807)</u>
Derivative financial assets	₩ 78,699	₩ 302,529	₩ 107,416	₩ 95,903
Derivative financial liabilities	(44,587)	(246,125)	(68,858)	(261,710)

(2) The Group has entered into derivatives (such as foreign exchange forwards, foreign exchange swap and interest swap) contracts in order to avoid exchange rate risk of foreign currency assets and liabilities and the interest rate risk associated with debts. As of December 31, 2019, significant derivative financial instruments that the Group holds as a hedge or held-for-trading are as follows:

Segments	Purpose of transaction	Classification	Financial institutes
SK Holdings Co., Ltd.	Hedge of foreign currency exchange risk of foreign currency denominated contract	Foreign exchange forwards and total revenue swap agreement	KEB Hana Bank
SK Innovation Co., Ltd.	Cash flow hedge of forecasted sales of products and the risk of changes in market interest rates	Merchandise derivative and interest swaps	Societe Generale, BNP Paribas and others
SK Telecom Co., Ltd.	Hedge of foreign currency exchange risk of foreign currency denominated bond, hedge of currency exchange, interest rate risk of floating rate foreign currency denominated bond and the risk of changes in market interest rates	Foreign exchange swaps and interest swaps	Korea Development Bank, DBS Bank and others
SK Networks Co., Ltd.	Hedge of foreign currency exchange risk of foreign currency denominated debt and bond	Foreign exchange forwards and others	KEB Hana Bank, Kookmin Bank and others
SKC Co., Ltd.	Hedge of foreign currency exchange risk of foreign currency denominated debt and bond	Foreign exchange forwards and interest rate swaps	KEB Hana Bank, Standard Chartered Bank, Shinhan Bank and others
SK E&S Co., Ltd.	Hedge of foreign currency exchange risk of foreign currency denominated borrowings and hedge of interest rate of floating rate borrowings.	Foreign exchange forwards and interest rate swaps	Korea Development Bank, Woori Bank, NH Bank, Kookmin Bank and others
SK Engineering & Construction Co., Ltd.	Price change hedge of natural gas purchase contract	Merchandise swaps	JP Morgan, BNP Paribas and others
	Hedge of changes in revenue from construction contract denominated in foreign currency	Foreign exchange forwards	Standard Chartered Bank, KEB Hana Bank and others
	Hedge of changes in construction cost of construction contract denominated in foreign currency	Foreign exchange forwards	BNP Paribas, HSBC and others
	Held-for-trading	Foreign exchange	HSBC, KEB Hana Bank and others

## 22. Equity

(1) Details of issued capital as of December 31, 2019 and 2018 are as follows (Korean won in millions, except for number of shares):

	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Number of shares authorized for issue	400,000,000	400,000,000
Per share (Korean won)	₩ 200	₩ 200
Number of shares issued:		
Ordinary share	70,360,297	70,360,297
Preferred share	566,135	566,135
Issued capital:		
Ordinary share	₩ 15,272	₩ 15,272
Preferred share	113	113
	<u>₩ 15,385</u>	<u>₩ 15,385</u>

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

(2) Details of other paid-in capital as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Additional paid-in capital (*1)	₩ 5,605,831	₩ 5,605,831
Treasury shares (*2)	(1,812,042)	(904,493)
Others	280,387	(69,383)
	<u>₩ 4,074,176</u>	<u>₩ 4,631,955</u>

(\*1) During the year ended December 31, 2015, the Company repurchased treasury shares of ₩3,369,310 million from merger with the former SK Holdings Co., Ltd., which was recognized as a contra-equity account on additional paid-in capital.

(\*2) As of December 31, 2019, treasury shares consist of those acquired to increase the enterprise value and to stabilize share price (7,034,276 ordinary shares) and those acquired from repurchase of shares from dissenting shareholders on business combination and shares arising from odd lot shares (11,021,674 ordinary shares and 1,818 preferred shares) during the year 2015. It includes 3,520,000 shares acquired to enhance shareholders value through stabilizing the share price.

(3) Details of retained earnings as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Legal reserve (*1)	₩ 7,693	₩ 7,693
Voluntary reserve	62,897	65,230
Unappropriated retained earnings	12,487,994	12,144,396
	<u>₩ 12,558,584</u>	<u>₩ 12,217,319</u>

(\*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.

**SK Holdings Co., Ltd. and its subsidiaries**  
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**22. Equity (cont'd)**

(4) Details of dividends proposed for approval at the annual ordinary shareholders' meeting for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the years ended			
	December 31, 2019		December 31, 2018	
	Ordinary share	Preferred share	Ordinary share	Preferred share
Number of shares (*1)	52,304,347	564,317	55,824,347	564,317
Par value per share (Korean won)	₩ 200	₩ 200	₩ 200	₩ 200
Dividend rate	2.000%	2.025%	2.000%	2.025%
Dividends	₩ 209,217	₩ 2,286	₩ 223,297	₩ 2,286

(\*1) The total number of shares was calculated from the number of issued shares excluding treasury shares.

(5) Details of other components of equity as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	December 31, 2019	December 31, 2018
Net loss on valuation of financial assets measured at FVOCI	₩ (49,689)	₩ (22,860)
Equity adjustments of investments in associates and joint ventures	8,429	(86,248)
Net gain on valuation of derivative instruments	5,947	10,756
Net gain (loss) on translation of foreign operation	72,937	(138,791)
	₩ 37,624	₩ (237,143)

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

1) SK Holdings Co., Ltd.

	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 based on exercise date), the Group may settle the difference in cash or with treasury stock equivalent to the difference 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 ~ 2022.03.24	2020.03.25 ~ 2023.03.24	2021.03.25 ~ 2024.03.24
Vesting conditions	2 year service from the grant date	3 year service from the grant date	4 year service from the grant date

Share compensation expense recognized during the current reporting period is ₩976 million (total : ₩3,783 million), and the remaining share compensation expense to be recognized in later periods is ₩504 million.

**SK Holdings Co., Ltd. and its subsidiaries**  
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**22. Equity (cont'd)**

The Group 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 (Korean won):

	1-1	1-2	1-3
Risk-free interest rate	1.86%	1.95%	2.07%
Life of the options	5 Years	6 Years	7 Years
Expected price (closing price on the preceding)	₩ 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	₩ 226,290	₩ 244,400	₩ 263,950
Fair value per share	₩ 38,317	₩ 34,200	₩ 30,962

2) Subsidiaries of the Company established a stock option program that entitles key management personnel an option to purchase ordinary shares. Share-based compensation expenses recognized under the share option program are as follows (Korean won in millions):

	Current	Accumulated	Remaining	Total
Group of SK Innovation Co., Ltd.	₩ 856	₩ 1,524	₩ 371	₩ 1,895
Group of SK Telecom Co., Ltd.	2,073	3,276	4,498	7,774
Group of SK Networks Co., Ltd.	337	590	157	747
Group of SKC Co., Ltd.	575	1,054	231	1,285
Group of SK E&S Co., Ltd.	112	460	50	510
Others	336	565	-	565
	₩ 4,289	₩ 7,469	₩ 5,307	₩ 12,776

**23. Selling and administrative expenses**

Details of selling and administrative expenses for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2019	December 31, 2018
Salaries	₩ 1,214,660	₩ 1,209,881
Provision for pension benefits	126,459	114,284
Employee welfare benefits	232,493	241,975
Travel	78,259	72,010
Bad debt expenses	181,847	148,344
Communications	7,792	8,504
Utilities	33,025	30,188
Taxes and dues	87,777	87,421
Supplies	43,743	29,797
Rents	177,639	153,070
Depreciation	426,369	211,922
Amortization	216,113	180,588
Repairs	6,894	22,763
Insurance	33,425	28,899
Advertising	602,489	636,045
Research and development	384,747	380,465
Education and examination	94,999	88,932
Outsourcing technology services	742,378	609,650
Transport	289,762	380,791
Others	127,662	168,976
	₩ 5,108,532	₩ 4,804,505

**SK Holdings Co., Ltd. and its subsidiaries**  
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**24. Finance income and costs**

Details of finance income and costs for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2019	December 31, 2018
Finance income:		
Interest income	₩ 268,075	₩ 231,987
Gain on foreign currency transactions	1,059,172	987,803
Gain on foreign currency translation	257,573	227,796
Gain on transactions of derivatives	1,535,464	1,523,271
Gain on valuation of derivatives	246,270	826,045
Others	52,629	125,459
	<u>₩ 3,419,183</u>	<u>₩ 3,922,361</u>
	For the years ended	
	December 31, 2019	December 31, 2018
Finance costs:		
Interest expenses	₩ 1,380,350	₩ 1,019,095
Loss on foreign currency transactions	1,197,469	1,172,121
Loss on foreign currency translation	291,941	234,590
Loss on transactions of derivatives	1,670,838	1,001,024
Loss on valuation of derivatives	227,283	1,030,292
Others	26,557	48,762
	<u>₩ 4,794,438</u>	<u>₩ 4,505,884</u>

**25. Other non-operating income and expenses**

(1) Details of other non-operating income for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2019	December 31, 2018
Other non-operation income:		
Dividend income	₩ 23,439	₩ 32,690
Rental income	880	630
Gain on disposal of trade receivables	15,855	-
Gain on disposal of investments in associates and joint ventures	358,028	99,108
Gain on disposal of property, plant and equipment	16,335	193,449
Gain on disposal of intangible assets	3,458	3,265
Gain on disposal of other investment assets	2,088	12,121
Others	457,010	394,887
	<u>₩ 877,093</u>	<u>₩ 736,150</u>

**25. Other non-operating income and expenses (cont'd)**

(2) Details of other non-operating expenses for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	<u>For the years ended</u>	
	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Other non-operation expenses:		
Loss on disposal of trade receivables	₩ 26,568	₩ 7,140
Loss on disposal of investments in associates and joint ventures	7,665	59,366
Loss on impairment of investments in associates and joint ventures	15,832	3,214
Loss on disposal of property, plant and equipment	121,682	164,556
Loss on impairment of property, plant and equipment	227,813	74,402
Loss on disposal of intangible assets	3,722	12,809
Loss on impairment of intangible assets	388,558	90,814
Loss on disposal of other investment assets	3	3
Loss on impairment of other investment assets	3,360	4,685
Donations	134,481	193,844
Others	341,431	332,923
	<u>₩ 1,271,115</u>	<u>₩ 943,756</u>

**26. Expense classified based on nature of expense**

Details of classification based on nature of expenses for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	<u>For the years ended</u>	
	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Employee benefits	₩ 6,857,356	₩ 6,155,236
Depreciation and amortization	7,513,747	5,459,237
Network connection	759,294	815,369
Transport	508,156	479,990
Advertising	584,291	628,470
Lease payments and rents	615,918	832,904
Others	17,388,118	17,391,927
Use of raw materials and purchase of finished goods and merchandise	61,568,708	64,982,315
Changes in finished goods and semi-finished goods	(480,878)	(1,267,594)
	<u>₩ 95,314,710</u>	<u>₩ 95,477,854</u>

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**27. Income taxes**

(1) Components of income tax expense for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2019	December 31, 2018
Current income tax	₩ 1,091,737	₩ 1,288,185
Adjustments in respect of current income tax of prior year	(22,731)	(3,519)
Origination and reversal of temporary difference	(76,333)	723,634
Income tax recognized directly to equity	39,932	70,503
Others	3,303	13,982
Income tax expense	₩ 1,035,908	₩ 2,092,785
Income tax expense from continuing operations	₩ 1,075,631	₩ 1,931,757
Income tax expense (benefits) from discontinued operations	(39,723)	161,028

(2) Details of income tax recognized directly to equity for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2019	December 31, 2018
Remeasurement loss on defined benefit plan	₩ 36,108	₩ 34,962
Net loss on valuation of financial instruments measured at FVOCI	15,807	55,586
Equity adjustments of investments in associates and joint ventures	(6,968)	(106)
Net gain on valuation of derivative instruments	(12,372)	(13,939)
Others	7,357	(6,000)
	₩ 39,932	₩ 70,503

(3) Reconciliations of profit before income tax expense at the Korea statutory tax rate to income tax expense at the effective tax rate of the Group for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2019	December 31, 2018
Profit before income tax expense	₩ 2,643,157	₩ 8,243,926
Profit before income tax expense from continuing operations	2,776,568	7,558,142
Profit (loss) before income tax expense from discontinued operations	(133,411)	685,784
Applied tax rates (*1)	24.2%	24.2%
Income tax at statutory tax rate	639,644	1,995,030
Non-taxable income	(443,231)	(261,814)
Non-deductible expenses	102,562	77,887
Tax credit	(81,839)	(43,134)
Unrecognized deferred taxes	100,079	(72,262)
Effect of changes in tax rates	2,575	(3,973)
Others (*1)	716,118	401,051
Income tax expense	₩ 1,035,908	₩ 2,092,785
Income tax expense from continuing operations	₩ 1,075,631	₩ 1,931,757
Income tax benefits from discontinued operations	(39,723)	161,028
Effective tax rate	38.7%	25.6%

(\*1) The Company is subject to corporate income tax of Republic of Korea where the parent company is located. For the year ended December 31, 2019, the difference between the Korean tax burdens and the foreign tax burdens on foreign subsidiaries amounting to ₩597,257 million is included in others.

**SK Holdings Co., Ltd. and its subsidiaries**  
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**27. Income taxes (cont'd)**

(4) Significant changes in deferred tax assets (liabilities) for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the year ended December 31, 2019					
	Beginning balance	Business combination	Recognized directly in profit or loss	Recognized directly in equity	Others	Ending balance
Temporary differences	₩(5,255,410)	₩ (1,265)	₩ 160,569	₩ 39,932	₩ 25,036	₩ (5,031,138)
Tax loss carryforward	405,294	-	(124,382)	-	1,097	282,009
Tax credits carryforward	53,754	-	214	-	34	54,002
	<u>₩(4,796,362)</u>	<u>₩ (1,265)</u>	<u>₩ 36,401</u>	<u>₩ 39,932</u>	<u>₩ 26,167</u>	<u>₩ (4,695,127)</u>
Deferred tax assets (*1)	₩ 694,690					₩ 798,454
Deferred tax liabilities (*1)	(5,491,052)					(5,493,581)

	For the year ended December 31, 2018					
	Beginning balance	Business combination	Recognized directly in profit or loss	Recognized directly in equity	Others	Ending balance
Temporary differences	₩(3,626,425)	₩ (297,967)	₩ (847,594)	₩ 70,503	₩ (553,927)	₩ (5,255,410)
Tax loss carryforward	353,080	12,971	27,000	-	12,243	405,294
Tax credits carryforward	19,593	1,931	26,457	-	5,773	53,754
	<u>₩(3,253,752)</u>	<u>₩ (283,065)</u>	<u>₩ (794,137)</u>	<u>₩ 70,503</u>	<u>₩ (535,911)</u>	<u>₩ (4,796,362)</u>
Deferred tax assets (*1)	₩ 734,524					₩ 694,690
Deferred tax liabilities (*1)	(3,988,276)					(5,491,052)

(\*1) The Group offsets tax assets and liabilities if, and only if, it has a legally enforceable right to set off current tax assets and current tax liabilities and the deferred tax assets and deferred tax liabilities related to income taxes are levied by the same tax authority.

(5) The expected expiration schedule of tax loss carryforward and tax credits carryforward for which deferred tax assets are not recognized as of December 31, 2019 is as follows (Korean won in millions):

	Tax loss carryforward	Tax credits carryforward
1 year or less	₩ 108,703	₩ 14,466
1 year ~ 2 years	152,361	435
2 years ~ 3 years	80,363	8,374
More than 3 years	1,052,053	7,833
	<u>₩ 1,393,480</u>	<u>₩ 31,108</u>



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**28. Earnings per share**

(1) Basic earnings per share for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions, except per share and weighted-average number of ordinary shares outstanding):

	For the years ended	
	December 31, 2019	December 31, 2018
Profit for the year attributable to owners of the parent	₩ 717,270	₩ 2,253,123
Less: preferred share dividends	(2,850)	(2,850)
Profit for the year attributable to ordinary share owners of the parent	₩ 714,420	₩ 2,250,273
Weighted-average number of ordinary share outstanding (*1)	55,309,048	55,824,350
Basic earnings per share (in Korean won) (*2)	₩ 12,917	₩ 40,310

(\*1) The weighted-average number of ordinary share outstanding is calculated by multiplying the number of shares issued by the portion of the reporting period those shares covered. The treasury shares held until the disposal date, after the date of acquisition, are excluded from the number of ordinary shares outstanding.

(\*2) Basic earnings per share are net income attributable to share owners of the parent per ordinary share.

The basis of calculating weighted-average number of ordinary shares for the years ended December 31, 2019 and 2018 is as follows:

	For the years ended	
	December 31, 2019	December 31, 2018
Weighted-average number of issued shares outstanding	70,360,297	70,360,297
Weighted-average number of treasury shares	(15,051,249)	(14,535,947)
Weighted-average number of ordinary shares outstanding	55,309,048	55,824,350

(2) Basic earnings per share from continuing operations

Basic earnings per share from continuing operations for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions, except basic earnings per share and weighted-average number of ordinary shares outstanding):

	For the years ended	
	December 31, 2019	December 31, 2018
Profit for the year attributable to owners of the parent	₩ 714,420	₩ 2,250,273
Less: gain (loss) from discontinued operations	(37,812)	374,802
Profit for the year from continuing operations attributable to owners of the parent	₩ 752,232	₩ 1,875,471
Weighted-average number of ordinary shares outstanding	55,309,048	55,824,350
Basic earnings per share from continuing operations (in Korean won)	₩ 13,601	₩ 33,596

(3) Basic earnings (loss) per share from discontinued operations

Basic earnings (loss) per share from discontinued operations for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions, except basic losses per share and weighted-average number of ordinary shares outstanding):

	For the years ended	
	December 31, 2019	December 31, 2018
Gain (loss) from discontinued operations attributable to owners of the parent	₩ (37,812)	₩ 374,802
Weighted-average number of ordinary shares outstanding	55,309,048	55,824,350
Basic earnings (loss) per share from discontinued operations (in Korean won)	₩ (684)	₩ 6,714

**SK Holdings Co., Ltd. and its subsidiaries**  
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**December 31, 2019 and 2018**

**29. Transactions with related parties**

Balances on transactions arising from intercompany transactions within the Group were eliminated in preparing the consolidated financial statements as of and for the years ended December 31, 2019 and 2018.

(1) Details of significant transactions with the related parties for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	Company name	December 31, 2018		
		Sales and others	Expenses and others	
Other related parties	Daehan Oil Pipeline Corporation	₩ 40,553	₩ 54,971	
	SABIC SK Nexlene Company Pte. Ltd.	3,004	178,516	
	Korea Nexlene Company	144,146	299	
	Hana land chip PEF 33	16,058	35,636	
	F&U Credit Information Co., Ltd.	2,421	56,672	
	Wave City Development Co., Ltd.	45,900	-	
	SK Hynix Inc.	3,468,490	20,435	
	SK Hynix Semiconductor (China) Ltd.	472,607	1,711	
	SK Hynix Semiconductor (Chongqing) Ltd.	51,411	-	
	SK Hynix Semiconductor HK Ltd.	-	703,662	
	SK Hynix System IC	63,626	-	
	Happynarae Co., Ltd.	77,771	492,751	
	SKC Evonik Peroxide Korea Co., Ltd.	3,806	49,791	
	Mitsui Chemicals & SKC Polyurethanes, Inc.	216,673	20,520	
	Boryeong LNG Terminal Co., Ltd.	64,254	81,164	
	Eurasia Tunnel	6,036	-	
	Xe-Pian Xe-Namnoy Power Company	74,402	-	
	Others	200,622	79,707	
	Others (*1)	SK Chemicals Co., Ltd.	131,704	117,159
		SK Gas Co., Ltd.	118,387	255,760
SK Shipping Co., Ltd. (*2)		2,188	83,648	
Ubins Co., Ltd.		796	118,680	
Others		86,492	141,723	
		₩ 5,291,347	₩ 2,492,805	

(\*1) Although, not designated as related parties as defined in KIFRS 1024, the entity belongs to the same conglomerate affiliates under *Monopoly Regulation and Fair Trade Act*.

(\*2) As of February 19, 2019, the entity was excluded from the 'SK' conglomerate affiliates under the *Monopoly Regulation and Fair Trade Act*.

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**29. Transactions with related parties (cont'd)**

	Company name	December 31, 2018		
		Sales and others	Expenses and others	
Other related parties	Daehan Oil Pipeline Corporation	₩ 28,622	₩ 52,819	
	SABIC SK Nexlene Company Pte. Ltd.	3,182	158,720	
	Korea Nexlene Company	174,914	217	
	Hana land chip PEF 33	16,027	35,430	
	F&U Credit Information Co., Ltd.	2,990	55,906	
	Wave City Development Co., Ltd.	23,129	-	
	SK Hynix Inc.	4,032,327	6,255	
	SK Hynix Semiconductor (China) Ltd.	596,773	2,630	
	SK Hynix Semiconductor (Chongqing) Ltd.	53,084	22	
	SK Hynix Semiconductor HK Ltd.	-	900,772	
	SK Hynix System IC	72,363	-	
	SKC Evonik Peroxide Korea Co., Ltd.	2,910	48,299	
	Mitsui Chemicals & SKC Polyurethanes, Inc.	239,923	20,705	
	Boryeong LNG Terminal Co., Ltd.	49,103	83,389	
	Eurasia Tunnel	6,332	-	
	Xe-Pian Xe-Namnoy Power Company	80,763	-	
	Others	144,897	114,663	
	Others (*1)	SK Chemicals Co., Ltd. (*2)	205,280	130,005
		SK Gas Co., Ltd. (*3)	480,764	362,463
		Others	44,303	89,704
		<u>₩ 6,257,686</u>	<u>₩ 2,061,999</u>	

(\*1) Although, not designated as related parties as defined in KIFRS 1024, the entity belongs to the same conglomerate affiliates under *Monopoly Regulation and the Fair Trade Law*.

(\*2) SK Chemicals Co., Ltd. merged with SK Petrochemical Co., Ltd. on May 1, 2018. The transaction amount of SK Petrochemical Co., Ltd. is included in SK Chemicals Co., Ltd..

(\*3) SK Gas Co., Ltd. merged with G.Hub Co., Ltd. on December 24, 2018. The transaction amount of G.Hub Co., Ltd. is included in SK Gas Co., Ltd..

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**29. Transactions with related parties (cont'd)**

(2) Details of significant outstanding balances of receivables and payables with the related parties as of December 31, 2019 and 2018 are as follows (Korean won in millions):

	Company name	December 31, 2019		December 31, 2018	
		Receivables		Receivables	
		(*1)	Payables	(*1)	Payables
Other related parties	Daehan Oil Pipeline Corporation	₩ 100	₩ 2,946	₩ 3,188	₩ 663
	SABIC SK Nexlene Company Pte. Ltd.	2,943	19,851	6,881	34,797
	Korea Nexlene Company	7,552	249	16,316	52
	Hana land chip PEF 33	5,983	42,464	5,983	-
	Korea Consortium Kazakh B.V. (*2)	146,170	-	146,170	-
	F&U Credit Information Co., Ltd.	8	4,869	104	5,801
	Wave City Development Co., Ltd.	57,662	-	69,745	-
	SK Hynix Inc.	602,213	124,954	748,912	166,584
	SK Hynix Semiconductor (China) Ltd.	123,739	816	109,248	1,099
	SK Hynix Semiconductor (Chongqing) Ltd.	11,420	96	25,927	7,289
	SK Hynix Semiconductor HK Ltd.	-	37,823	-	71,673
	SK Hynix System IC Co., Ltd.	20,189	38	8,901	-
	Happynarae Co., Ltd.	13,875	43,110	11,247	35,726
	SKC Evonik Peroxide Korea Co., Ltd.	2	5,267	-	3,585
	Mitsui Chemicals & SKC Polyurethanes, Inc.	34,231	2,907	6,627	4,481
	Boryeong LNG Terminal Co., Ltd.	3,338	166	12,386	-
	Pentaport Development Co., Ltd.	79,532	-	79,534	-
	Eurasia Tunnel	37,338	-	32,001	-
	SK E&C JURONG Investment Singapore Pte. Ltd. (*2)	59,914	-	59,914	-
	Xe-Pian Xe-Namnoy Power Company	136,478	26,629	49,629	28,009
	Others	59,689	31,203	35,550	21,152
Others (*3)	SK Chemicals Co., Ltd.	17,652	10,195	40,679	9,828
	SK Gas Co., Ltd.	3,150	307,731	36,374	62,935
	SK Shipping Co., Ltd. (*4)	-	-	20,971	17,613
	Ubins Co., Ltd.	92	25,832	-	-
	Others	12,067	23,111	1,152	21,458
		<u>₩ 1,435,237</u>	<u>₩ 710,257</u>	<u>₩ 1,527,439</u>	<u>₩ 492,745</u>

(\*1) The Group recognized bad debt expense amounting to ₩22,846 million and ₩42,987 million for the years ended December 31, 2019 and 2018, respectively. The Group recognized losses from write-off and others amounting to ₩(-)3,848 million for the year ended December 31, 2019. The Group recognized the loss allowance amounting to ₩314,245 million and ₩295,247 million as of December 31, 2019 and 2018, respectively.

(\*2) As of December 31, 2019 and 2018, the Group recognized loss allowances in full amount of corresponding receivables.

(\*3) Although, not designated as related parties as defined in KIFRS 1024, the entity belongs to the same conglomerate affiliates under *Monopoly Regulation and the Fair Trade Act*.

(\*4) As of February 19, 2019, the entity was excluded from the 'SK' conglomerate affiliates under the *Monopoly Regulation and Fair Trade Act*.

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**29. Transactions with related parties (cont'd)**

(3) Details of significant financial transactions with related-parties for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions and foreign currencies in thousands):

Company	Currency	December 31, 2019		December 31, 2018	
		Loans	Collection	Loans	Collection
Yemen LNG Company Ltd.	USD	9,438	-	7,263	-
Zhejiang Shenxin SK Packaging Co., Ltd.	KRW	-	799	-	-
Eurasia Tunnel	KRW	16,330	13,872	24,659	11,369
Xe-Pian Xe-Namnoy Power Company	KRW	43,289	-	-	-
SK Wyverns Baseball Club Co., Ltd.	KRW	-	202	-	204
Kinestral Technologies Inc.	USD	2,483	-	-	-
Xian Tianlong Science and Technology Co., Ltd. (*1)	KRW	-	-	-	7,032

(\*1) Excluded from associates during the year ended December 31, 2018 as the entire equity was sold.

(4) There were additional capital contribution transactions for investments in associates and joint ventures for the years ended December 31, 2019 and 2018 (see Note 10 'Investments in associates and joint ventures').

(5) Compensation for key management personnel of the Company.

Key management personnel consists of registered executives who are responsible for the planning, operation and control of the Company's business activities. Details of compensation for them for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2019	December 31, 2018
Salaries	₩ 11,594	₩ 9,773
Provision for pension benefits	2,542	2,332
Share-based payment expenses	976	1,586
	₩ 15,112	₩ 13,691

### 30. Discontinued operations

#### (1) Details of discontinued operations

The Company elected to discontinue its operation of used car sales business to close down its non-core business and to secure investment resources. The sale of SK Encarsales.com Ltd., for the online used car sales business was completed in January 2018, and the sale of assets and liabilities of offline Encar, the used car sales business segment, was completed on April 3, 2018.

SK Innovation Co., Ltd., a subsidiary of the Group, decided to cease its operation of the flexible-copper-clad-laminate (FCCL) business in the prior period in order to focus on its core businesses, such as the exploration and development of oil and the production of batteries. SK Innovation Co., Ltd., a subsidiary, recognized the gain or loss on discontinued operations which occurred from the disposal of a portion of the assets of an optical material (TAC) business which was classified as discontinued operation prior to the current period.

SK Shipping Co., Ltd. issued 61,392,448 ordinary shares and 4,977,766 convertible shares on a third-party allotment on December 27, 2018 in accordance with the resolution of the Board of Directors on October 8, 2018. SK Shipping Co., Ltd. was excluded from the consolidated subsidiaries as all of its shares were acquired by Han&Co Tanker Holdings Limited, and Han&Co Tanker Holdings Limited acquired 69.81% shares of SK Shipping Co., Ltd. (based on ordinary shares).

The Group sold its entire stake in Happy Narae Co., Ltd. to SK Hynix Inc. on December 21, 2018 to wind up its noncore business.

SK Networks, Co., Ltd., a subsidiary of the Group, elected to discontinue its fashion business and duty-free business in 2016 and resources business and businesses in Shenyang and Dandong in 2017 to strengthen its financial soundness and secure investment resources. SK Networks Co., Ltd. completed the sale of its fashion business in February 2017 and cleared the assets and liabilities of the duty-free business in 2017. In addition, the resources business and businesses in Shenyang and Dandong are in the process of disposing of the legal entity and assets. In addition, in relation to the sale of gasoline retail business, SK Networks, Co., Ltd. selected and notified the consortium of Hyundai Oilbank Co., Ltd. and Koramco REITs & Trust Co. as a priority negotiator of the sale. The purpose of this sale transaction is to dispose of non-core business, and accordingly, strengthen its financial soundness and secure investment resources.

(2) Gain and loss from the discontinued operation for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the year ended December 31, 2019		
	Oil retail business in SK Networks Co., Ltd.	Resource business and others in SK Networks Co., Ltd.	Total
Revenue	₩ 1,106,446	₩ 41,536	₩ 1,147,982
Expenses	1,143,271	138,122	1,281,393
Loss before income tax expense	(36,825)	(96,586)	(133,411)
Income tax benefit	(8,911)	(30,812)	(39,723)
Loss from discontinued operations	₩ (27,914)	₩ (65,774)	₩ (93,688)
Attributable to:			
Owners of the parent	₩ (11,266)	₩ (26,546)	₩ (37,812)
Non-controlling interests	(16,648)	(39,228)	(55,876)

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**30. Discontinued operations (cont'd)**

For the year ended December 31, 2018								
	Used car Business in SK Holdings Co., Ltd.	SK Encarsales .com Ltd.	FCCL business and others in SK Innovation Co., Ltd.	Shipping Industry in SK Shipping Co., Ltd.	Happy Narae Co., Ltd.	Oil retail business in SK Networks Co., Ltd.	Resource business and others in SK Networks Co., Ltd.	Total
Revenue	₩ 321,401	₩ 180,884	₩ 79,829	₩ 2,258,121	₩ 1,118,608	₩ 1,366,224	₩ 59,760	₩ 5,384,827
Expenses	281,262	-	61,808	1,800,998	1,079,347	1,395,983	79,645	4,699,043
Gain (loss) before income tax expense	40,139	180,884	18,021	457,123	39,261	(29,759)	(19,885)	685,784
Income tax expense (benefit)	9,202	43,774	4,956	102,886	9,735	(7,202)	(2,323)	161,028
Gain (loss) from discontinued operations	₩ 30,937	₩ 137,110	₩ 13,065	₩ 354,237	₩ 29,526	₩ (22,557)	₩ (17,562)	₩ 524,756
Attributable to :								
Owners of the parent	30,937	137,110	4,574	212,733	5,276	(9,104)	(6,724)	374,802
Non-controlling interests	-	-	8,491	141,504	24,250	(13,453)	(10,838)	149,954

(3) Details of cash flows relating to discontinued operations for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

For the year ended December 31, 2019			
	Oil retail business in SK Networks Co., Ltd.	Resource business and others in. SK Networks Co., Ltd.	Total
Cash flows from operating activities	₩ (21,487)	₩ (13,311)	₩ (34,798)
Cash flows from investing activities	15,080	(4,683)	10,397
Cash flows from financing activities	-	3,218	3,218

  

For the year ended December 31, 2018								
	Used car Business in SK Holdings Co., Ltd.	SK Encarsales .com Ltd.	FCCL business and others in SK Innovation Co., Ltd.	Shipping Industry in SK Shipping Co., Ltd.	Happy Narae Co., Ltd.	Oil retail business in SK Networks Co., Ltd.	Resource business and others in SK Networks Co., Ltd.	Total
Cash flows from operating activities	₩ 24,976	₩ -	₩ 49,408	₩ 156,992	₩ 23,417	₩ (154,020)	₩ (270)	₩ 100,503
Cash flows from investing activities	187,661	182,606	(89,506)	(127,113)	38,113	26,786	29,334	247,881
Cash flows from financing activities	(16)	-	-	227,284	-	(14,053)	(39,030)	174,185

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**31. Assets and liabilities held for sale**

Details of assets and liabilities held for sale as of December 31, 2019 are as follows (Korean won in millions):

		December 31, 2019	
		Assets	Liabilities
Subsidiaries	Daiyang SK Networks San. VE TIC. Ltd. STI ₩	765	₩ 654
Joint ventures	SKC-Kolon PI Co., Ltd. (*1)	67,687	-
Business segment	Oil retail business segment and others (*2)	1,508,265	249,007
	Ferrite business	2,000	-
Property, plant and equipment	Land and others (*3)	67,000	-
Intangible assets	Peru 56, 88 mining area (*4)	662,487	7,865
		<u>₩ 2,308,204</u>	<u>₩ 257,526</u>

(\*1) SKC Co., Ltd., a subsidiary, decided to sell the investments in joint ventures to secure investment resources of new business. The Group classified related assets and liabilities as held-for-sale and measured them at the lower of their carrying amounts and fair value less costs to sell.

(\*2) SK Networks Co., Ltd., a subsidiary, decided to discontinue oil retail business resources segment during the current period and business segment and others before the prior reporting period. The Group classified related assets and liabilities as held-for-sale and measured them at the lower of their carrying amounts and fair value less costs to sell.

(\*3) SK Incheon Petrochemical Co., Ltd. a subsidiary, classified related assets as assets held-for-sale as the entity signed a contract for sale of the land in Seoknam-dong, western Incheon, during the prior period, and the entity measured it at the lower of its fair value less costs to sell and carrying amount.

(\*4) SK Innovation Co., Ltd., a subsidiary, entered into a contract to sell its entire stake in the 56th and 88th Peru blocks to Pluspetrol for the purpose of adjusting its E&P portfolio and converting its business model during the current period. The sale will be completed during the following period. The assets held for sale are measured at the lower of fair value less costs to sell and carrying amount.

**32. Lessor**

(1) Details of gross investment amount and net investment amount in finance leases as of December 31, 2019 are as follows (Korean won in millions):

	December 31, 2019	
	Gross investment	Net investment
1 year or less	₩ 66,983	₩ 63,349
1 year ~ 2 years	53,625	52,874
2 years ~ 3 years	42,471	40,019
3 years ~ 4 years	33,827	32,001
4 years ~ 5 years	22,065	20,971
More than 5 years	19,504	15,520
	<u>₩ 238,475</u>	<u>₩ 224,734</u>

(2) Details of unrealized interest income of finance leases for the year ended December 31, 2019 are as follows (Korean won in millions):

	December 31, 2019
Gross investment	₩ 238,475
Net investment	224,734
Unrealized interest income	13,741



**SK Holdings Co., Ltd. and its subsidiaries**  
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**32. Lessor (cont'd)**

(3) Details of variable lease payments that do not depend on an index or rate related to operating lease commitments for the year ended December 31, 2019 are as follows (in millions of Korean won):

	<u>December 31, 2019</u>	
Sales	₩	20,602
Other revenues		1,205

**33. Cash flow information**

(1) Details of non-cash adjustments for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	<u>For the years ended</u>	
	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Provision for pension benefits	₩ 410,807	₩ 371,291
Depreciation	5,981,265	4,538,295
Amortization	1,532,482	1,332,831
Bad debt expenses	181,731	163,308
(Reversal of)Valuation loss on inventories	(191,358)	280,275
Interest expenses	1,440,705	1,248,371
Loss on foreign currency translation	295,606	245,185
Loss on valuation of derivatives	226,656	1,039,748
Loss on disposal of trade receivables	26,568	7,140
Loss on disposal of investments in associates and joint ventures	7,665	59,366
Loss on impairment of investments in associates and joint ventures	16,109	-
Loss on disposal of property, plant and equipment	127,130	170,727
Loss on impairment of property, plant and equipment	227,813	74,402
Loss on disposal of intangible assets	3,722	12,817
Loss on impairment of intangible assets	388,558	91,192
Income tax expense	1,035,908	2,092,785
Share of profit of associates and joint ventures	(527,778)	(3,667,928)
Interest income	(269,995)	(251,492)
Gain on foreign currency translation	(261,183)	(237,780)
Gain on valuation of derivatives	(245,749)	(826,681)
Dividend income	(23,439)	(32,924)
Gain on disposal of trade receivables	(15,855)	-
Gain on disposal of investments in associates and joint ventures	(358,028)	(816,291)
Gain on disposal of property, plant and equipment	(31,114)	(231,235)
Gain on disposal of intangible assets	(3,458)	(3,303)
Others	(81,929)	(34,801)
	<u>₩ 9,892,839</u>	<u>₩ 5,625,298</u>

(2) Details of working capital adjustments for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	<u>For the years ended</u>	
	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Inventories	₩ 53,525	₩ (1,070,936)
Trade receivables	179,301	315,418
Other receivables	137,070	148,505
Trade payables	(158,477)	(539,666)
Other payables	45,483	(26,818)
Advances received	(164,157)	243,352
Defined benefit obligation	(208,194)	(226,526)
Plan assets	(363,255)	(244,286)
Others	(928,009)	(335,212)
	<u>₩ (1,406,713)</u>	<u>₩ (1,736,169)</u>

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**33. Cash flow information (cont'd)**

(3) Significant non-cash transactions for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2019	December 31, 2018
Increase in other payables due to acquisition of property, plant and equipment and others	₩ 523,164	₩ 1,245,304
Account reclassification of lease liabilities from changes in accounting policies	3,584,003	-

(4) Details of changes in liabilities arising from financing activities for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the year ended December 31, 2019					
	Beginning balance	Cash flows from financing activities	Non-cash transaction			Ending balance
			Changes in fair value	Changes in exchange rate	Others	
Short-term borrowings	₩ 3,426,330	₩ 2,413,278	₩ -	₩ (20,224)	₩ 68,973	₩ 5,888,357
Bonds payable and long-term borrowings	33,915,396	3,571,964	223	125,024	791,276	38,403,883
Long-term trade payables	2,393,027	(429,462)	-	-	9,648	1,973,213
Lease liabilities	21,394	(1,117,974)	-	(4,263)	5,170,086	4,069,243
Dividends payable	3,851	(1,816,265)	-	-	1,813,737	1,323
	<u>₩ 39,759,998</u>	<u>₩ 2,621,541</u>	<u>₩ 223</u>	<u>₩ 100,537</u>	<u>₩ 7,853,720</u>	<u>₩ 50,336,019</u>

  

	For the year ended December 31, 2018					
	Beginning balance	Cash flows from financing activities	Non-cash transaction			Ending balance
			Changes in fair value	Changes in exchange rate	Others	
Short-term borrowings	₩ 2,999,032	₩ 737,302	₩ -	₩ (1,185)	₩ (308,819)	₩ 3,426,330
Bonds payable and long-term borrowings	29,907,664	4,038,864	1,911	109,626	(142,669)	33,915,396
Long-term trade payables	3,746,917	(543,990)	-	-	(809,900)	2,393,027
Dividends payable	1,423	(1,511,072)	-	-	1,513,500	3,851
	<u>₩ 36,655,036</u>	<u>₩ 2,721,104</u>	<u>₩ 1,911</u>	<u>₩ 108,441</u>	<u>₩ 252,112</u>	<u>₩ 39,738,604</u>

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**34. Commitments and contingencies**

(1) Guarantees provided for the Group as of December 31, 2019 are as follows (Korean won in millions and foreign currencies in thousands):

Guarantee	Guarantor	Currency	Amount	Description of guarantee
SK Holdings Co., Ltd.	Korea Software Financial Corporation	KRW	291,860	Performance guarantees for contract and others
	Seoul Guarantee Insurance	KRW	300	Performance guarantees for contract and others
Iberian LUBE Base Oils S.A.	REPSOL Petroleo	EUR	1,500	Guarantee of debt
Netruck Co., Ltd.	Seoul Guarantee Insurance	KRW	738	Performance guarantees and others
SK Telink Co., Ltd.	KB Insurance Co., Ltd.	KRW	400	Performance guarantees for contract
	Seoul Guarantee Insurance	KRW	7,795	Performance guarantees for contract
SK Planet Co., Ltd.	KEB Hana Bank	KRW	391	Performance insurances for warranties and others
	Seoul Guarantee Insurance and others	KRW	2,038	Performance guarantees for contract and others
SK Broadband Co., Ltd.	Kookmin Bank and others	KRW	29,250	Guarantee of warranties-contract and others
SK Infosec Co., Ltd.	Korea Software Financial Cooperative	KRW	19,567	Guarantee of bid payment and others
SK M & Service Co., Ltd.	Seoul Guarantee Insurance	KRW	7,381	Guarantee of payment and others
PS&Marketing Corp.	Seoul Guarantee Insurance	KRW	461	Performance guarantees
Dreamus company Co., Ltd. (formerly, Iriver Co., Ltd.)	Seoul Guarantee Insurance	KRW	152	Performance guarantees for contract
One store Co., Ltd.	Seoul Guarantee Insurance	KRW	106	Guarantee for E-commerce and others
	KEB Hana Bank	KRW	100	Performance guarantees for contract
Home&Service Co., Ltd.	Seoul Guarantee Insurance	KRW	5	Performance guarantees
SK Store Co., Ltd.	Kookmin Bank	KRW	700	Performance guarantees and others
11street Co., Ltd.	KEB Hana Bank	KRW	620	Performance guarantees and others
	Seoul Guarantee Insurance	KRW	8,525	Guarantee of deposit on lease and others
FSK L&S Co., Ltd.	Seoul Guarantee Insurance	KRW	349	Performance guarantees for contract and others
SK Networks Co., Ltd.	KEB Hana Bank	KRW	2,000	Performance guarantees
	Woori Bank	KRW	547	Performance guarantees for sales contract
	Seoul Guarantee Insurance	KRW	13,420	Performance guarantees for contract
	Korea Trade Insurance Corporation	KRW	48,248	Guarantee of debt
SK Networks Service Co., Ltd.	Seoul Guarantee Insurance	KRW	9,190	Performance guarantees for sales contract
	KEB Hana Bank	KRW	1,200	Performance guarantees for contract
SK Magic Co., Ltd.	Seoul Guarantee Insurance	KRW	17,631	Performance insurances for warranties and others
	Machinery Financial Cooperative	KRW	1,582	Performance insurances for warranties and others
SK Magic Service Co., Ltd.	Seoul Guarantee Insurance	KRW	202	Guarantee of payment and others
SK Pinx Co., Ltd.	Seoul Guarantee Insurance	KRW	242	Performance guarantees for sales contract
SK Rent-a-Car Co., Ltd. (formely, AJ Rent a Car Co., Ltd.)	Seoul Guarantee Insurance	KRW	7,930	Performance guarantees for contract
SK Telesys. Co., Ltd.	Seoul Guarantee Insurance	KRW	4,349	Guarantee of warranties and contract
SK Bioland Co., Ltd.	Seoul Guarantee Insurance	KRW	94	Performance guarantees
SKC Solmics Co., Ltd.	Shinhan Bank	USD	20,000	Guarantee of FRN issue
SKC Hightech & Marketing Co., Ltd.	KEB Hana Bank	USD	27,000	Guarantee of FRN issue
SK E&S Co., Ltd.	Seoul Guarantee Insurance	KRW	393	Performance guarantees for contract and others
	Kookmin Bank	USD	80,000	Guarantee of debt
	Shinhan Bank	USD	80,000	Guarantee of debt
	Citi Bank	USD	3,120	Guarantee of bid
Yeongnam Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	1,347	Guarantee of warranties and approval
Chonnam Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	153	Guarantee of warranties and payment
Pusan City Gas Co., Ltd.	Seoul Guarantee Insurance	KRW	1,578	Guarantee of seizure contract and others
Jeonbuk Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	107	Performance guarantees and warranties
Chungcheong Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	1,264	Performance guarantees and others
Ko-one Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	2,434	Performance guarantees for contract
Paju Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	588	Performance guarantees for approval and others
Narae Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	65	Performance guarantees for contract
Wirye Energy Service. Co., Ltd.	Seoul Guarantee Insurance	KRW	146	Guarantee of license to use state property
Kangwon City Gas Co., Ltd.	Seoul Guarantee Insurance	KRW	1,033	Performance guarantees for contract and approval
Yeosu Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	1,219	Performance guarantees for deposit on approval

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**34. Commitments and contingencies (cont'd)**

<u>Guarantee</u>	<u>Guarantor</u>	<u>Currency</u>	<u>Amount</u>	<u>Description of guarantee</u>
SK Engineering & Construction Co., Ltd.	HSBC and others	USD	746,329	Performance guarantees for overseas construction and others
		SGD	40,937	Performance guarantees for overseas construction and others
		KWD	106,407	Performance guarantees for overseas construction and others
		QAR	513,413	Performance guarantees for overseas construction and others
		TRY	30,235	Performance guarantees for overseas construction and others
		SAR	228,716	Performance guarantees for overseas construction and others
		THB	327,088	Performance guarantees for overseas construction and others
		KZT	102,787	Performance guarantees for overseas construction and others
		VND	746,254,712	Performance guarantees for overseas construction and others
		HKD	20,061	Performance guarantees for overseas construction and others
		IQD	2,600,000	Performance guarantees for overseas construction and others
		AED	142,891	Performance guarantees for overseas construction and others
		KEB Hana Bank	USD	116,800
	GBP		29,571	Performance guarantees for overseas construction and others
	Shinhan Bank	EUR	155,037	Performance guarantees for overseas construction and others
		USD	1,915	Performance guarantees for overseas construction and others
	Korea Eximbank	USD	92,319	Performance guarantees for overseas construction and others
		SAR	128,276	Performance guarantees for overseas construction and others
		VND	14,077,332	Performance guarantees for overseas construction and others
		EUR	60,750	Performance guarantees for overseas construction and others
Korea Housing Guarantee Co., Ltd. Seoul Guarantee Insurance	KRW	3,347,059	Housing guarantees and others	
	KRW	375,023	Performance guarantees for domestic construction and others	
Engineering Financial Cooperative Construction Guarantee Cooperative	KRW	1,613,923	Domestic construction contract	
	KRW	2,498,342	Performance guarantees for domestic construction and others	
Information & Communication Financial Cooperative	KRW	209,871	Domestic construction contract	
	KRW	5,933	Guarantee of bid	
SK Biotek Co., Ltd.	Seoul Guarantee Insurance	KRW	3,000	Guarantee of debt
SK Materials Co., Ltd.	Korea Industrial Bank	USD	30,499	Performance guarantees
	Seoul Guarantee Insurance	KRW	19,000	Guarantee of foreign currencies
SK Siltron Co., Ltd.	Shinhan Bank	USD	16,921	Performance guarantees for contract
SK Forest Co., Ltd.	Construction Guarantee Cooperative	KRW	17,505	Performance guarantees for contract
	Seoul Guarantee Insurance	KRW	106	Guarantee of supply and others
HWEECHAN	Seoul Guarantee Insurance	KRW		
	Seoul Guarantee Insurance	KRW		

In addition, SK Engineering & Construction Co., Ltd., a subsidiary of the Group, has performance guarantees for domestic construction by other construction companies amounting to ₩355,777 million as of December 31, 2019.

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**34. Commitments and contingencies (cont'd)**

(2) Guarantees provided to others as of December 31, 2019 are as follows (Korean won in millions and foreign currencies in thousands):

Guarantee	Guarantor	Currency	Amount	Description of guarantee
SK Innovation Co., Ltd.	Petro Peru and others	USD	8,581	Performance guarantees for mandatory work and others
SK Global Chemical Co., Ltd.	Sabic SK Nexlene Company Pte. Ltd.	USD	168,000	Performance guarantees
Iberian Lube Base Oils S.A.	Puertos del Estado	EUR	1,173	Guarantees for construction
	Railway Administration and others	EUR	278	Guarantee for installing facilities and others
SK M & Service Co., Ltd.	Seoul Guarantee Insurance	KRW	2,227	Performance guarantees for transaction
SKC Co., Ltd.	SKC-Kolon PI Co., Ltd.	USD	6,750	Guarantee for litigation
SK E&S Co., Ltd.	Boryeong LNG Terminal Co., Ltd.	KRW	360,000	Guarantee of debt
SK Engineering & Construction Co., Ltd.	SBC General Trading & Contracting Co. WLL and others	KWD	6,085	Performance guarantees for contract and others
	Pohang Clean Water Co., Ltd. and others	USD	358	Performance guarantees for contract and others
	Bugae-seocho bridge north side redevelopment maintenance business association and others	KRW	676,721	Cash deficiency support agreement
	Customers of Kwangkyo SK view lake and others	KRW	417,963	Guarantees for reconstruction project financing
	Lu 1 City SK leaders view and others	KRW	981,721	Guarantee of debt
	Callable preferred share investor	KRW	1,987,013	Guarantee of completion
		KRW	260,000	Cash deficiency support agreement

In addition, SK Engineering & Construction Co., Ltd., a subsidiary of the Group, provides other construction companies with performance guarantees for domestic construction, and the amount of the guarantees is ₩738,085 million as of December 31, 2019.

(3) Pending litigations

The Group's significant pending litigations as of December 31, 2019, in which the Group is a plaintiff are as follows (Korean won in millions and foreign currencies in thousands):

Plaintiff	Defendant	Description	Claim	Status
Life & Security Holdings Co., Ltd.	Individual and others	Claim for injunction to ban of transfer	KRW 2,550	First trial in progress
PS&Marketing Corp.	Individual and others	Claim for promised deposit and others	KRW 459	First trial in progress and others
SK Networks Co., Ltd.	Individual and others	Claim for payment and others	KRW 3,452	First trial in progress and others
SK Magic Co., Ltd.	Careswater Co., Ltd. and others	Claim for payment and others	KRW 280	First trial in progress and others
SK Networks Service Co., Ltd.	Individual	Claim for payment	KRW 52	First trial in progress
SK Rent-a-Car Co., Ltd. (formerly, AJ Rent a Car Co., Ltd.)	Individual and others	Claim for payment and others	KRW 1,474	First trial in progress and others
SK Telesys Co., Ltd.	TaiYoung tech Co., Ltd. and others	Claim for payment	KRW 3,326	First trial in progress
Pusan City Gas Co., Ltd.	YCP Co., Ltd. and others	Claim for settlement	KRW 6,124	First trial in progress
SK Engineering & Construction Co., Ltd.	K-Water Resources Corporation	Claim for payment of construction	KRW 4,919	Third trial in progress
	Korea Rail Network Authority	Claim for payment of construction and others	KRW 16,420	Second trial in progress and others
	Fair Trade Commission	Claim related to Seohae double line train and others	KRW 1,723	Third trial in progress
	Korea Specialty Contractor	Claim for deposit of construction performance and others	KRW 2,901	Second trial in progress and others
	Finanacial Cooperative	Claim for payment of construction	KRW 12,728	Second trial in progress
	Dream Hub PFV	Claim for payment of construction	KRW 6,105	Second trial in progress and others
	Plant & Mechanical Contractors	Claim for payment and others	KRW 14,102	First trial in progress
	Financial Cooperative and others	Claim for payment of construction	KRW 30,901	Second trial in progress and others
	Korea National Oil Corporation	Claim for payment of construction and others	KRW 21,960	First trial in progress and others
	Republic of Korea and others	Claim for cost of construction and others	KRW 44	First trial in progress
	Korea Highway Corporation	Claim for payment of construction	KRW 3,561	Second trial in progress
	Korea Land & Housing Corporation	Claim related to Jangrim Jinhae	KRW 3,319	First trial in progress
	Korea Gas Corporation	Claim for payment of construction	KRW 7,720	First trial in progress and others
	Busan-Jinhae Free Economic Zone Authhority	Claim related to performance guarantee and others		
	Individual and others			

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**34. Commitments and contingencies (cont'd)**

The Group's significant pending litigations as of December 31, 2019, in which the Group is a defendant are as follows (Korean won in millions and foreign currencies in thousands):

Plaintiff	Defendant	Description	Claim	Status
Individual and others	Life & Security Holdings Co., Ltd.	Claim for damages and others	KRW 1,828	First trial in progress and others
Individual and others	PS&Marketing Corp.	Litigation for affirmation of non-existence of debt	KRW 20	First trial in progress
Individual and others	SK Networks Co., Ltd.	Claim for damages and others	KRW 9,275	First trial in progress and others
Individual and others	SK Networks Service Co., Ltd.	Claim for confirmation of dismissal and others	KRW 76	First trial in progress
Lotte Insurance Co., Ltd.	SK Magic Co., Ltd. and others	Claim for compensation and others	KRW 444	First trial in progress and others
DB Insurance and others	SK Rent-a-Car Co., Ltd. (formerly, AJ Rent a Car Co., Ltd.)	Claim for compensation	KRW 93	First trial in progress
Home Plus Co., Ltd. and others	SKC Co., Ltd.	Claim for damages	KRW 380	First trial in progress
Individual and others		Claim for damages and others	KRW 2,893	Second trial in progress and others
Seoul Special City and others	Ko-one Energy Service Co., Ltd.	Claim for penalty and others	KRW 25	First trial in progress
Busan Green Energy Co., Ltd. and others	Pusan City Gas Co., Ltd.	Claim for return of unfair benefit and others	KRW 656	First trial in progress
Yulim Engineering Co., Ltd.	Chonnam City Gas Co., Ltd.	Claim for payment of construction	KRW 92	First trial in progress
Korea Land & Housing Corporation	Chungcheong energy Service Co., Ltd.	Claim for cancellation of allotted charges	KRW 1,460	First trial in progress
K-Water Resources Corporation	SK Engineering & Construction Co., Ltd.	Claim for damages and others	KRW 4,004	Third trial in progress and others
Incheon Metropolitan City		Claim for damages and others	KRW 36,568	Third trial in progress and others
Individual and others		Claim for apartment	KRW 22,408	Second trial in progress
Samjung Construction Co., Ltd.		Claim for payment of construction	KRW 5,940	Second trial in progress
Hyundai Construction Co., Ltd.		Claim for share of defect cost	KRW 177	First trial in progress
Suseong Leaders view residents' Representative and others		Claim for warranty and others	KRW 11,669	Second trial in progress and others
Korea Rural Community Corporation		Claim for damages	KRW 8,036	First trial in progress
Korea Gas Corporation		Claim for damages and others	KRW 47,295	First trial in progress
Republic of Korea		Claim for damages and others	KRW 12,308	First trial in progress and others
Korea Rail Network Authority		Claim for damages	KRW 19,258	First trial in progress
Busan Transportation Corporation		Claim for damages and others	KRW 9,579	First trial in progress and others
Individual and others		Claim for apartment and others	KRW 24,779	First trial in progress and others

On April 29, 2019, LG Chem Ltd. and others (collectively referred to as "LGC") filed a lawsuit against SK Innovation Co., Ltd. and SK Battery America, Inc. (collectively referred to as "SKI"), the subsidiaries of the Group, regarding an infringement of its electric battery trade secrets and instituted a request to the U.S. International Trade Commission (ITC) for ban on the import of lithium ion battery and others. On November 5, 2019, LGC requested a default judgment to ITC over an incomplete fulfillment of evidence preservation obligation breached by SKI during the litigation process. On February 14, 2020, the ITC made a default judgment against SKI in a lawsuit without holding additional hearings for the infringement of trade secrets. According to the ITC's announcement, the final decision is to be made in October 2020.

On September 26, 2019, LGC additionally filed a lawsuit against SKI through the ITC alleging patent breaches and requested a ban on import as a remedial action. The lawsuit is currently in pending, and the final outcome is unpredictable as of December 31, 2019.

In addition, the above two lawsuits against SKI regarding infringement of trade secrets and breach of patent contract are also filed to the Federal District Court of Delaware on April 29, 2019 and September 26, 2019, respectively. The court ordered a temporary stop to both lawsuits, and accordingly, the final outcome is unpredictable as of December 31, 2019.

### 34. Commitments and contingencies (cont'd)

In addition, SKC Co., Ltd., a subsidiary, guarantees 50% of claim amounts related to the patent litigation filed by Kaneka Corporation to SKC Kolon PI, Inc. In accordance with the payment guarantee agreement and the decision of the court to dismiss the trial on appeal case as of December 31, 2019, provisions amounting to USD 6,750 thousand have been recognized, which is 50% of the claim for SKC Kolon PI, Inc. amounting to USD 13,500 thousand. The amounts are included in other non-operating expenses. By the final results of litigation, the actual damages to be paid by the Group could be increased according to the payment guarantee ratio of the agreement. As of December 31, 2019, the timing of the first trial judgment and related damage amounts are not predictable.

#### (4) Commitments

- 1) In accordance with the Commercial Code of the Republic of Korea, the Company, SK Innovation Co., Ltd., SK Energy Co., Ltd., SK Global Chemical Co., Ltd., SK Lubricants Co., Ltd., SK Incheon Petrochem Co., Ltd., SK Trading International Co., Ltd. and SK ie technology Co., Ltd. are collectively responsible for any obligations of the Company arising before the spin-off. 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 headquarter's building from National Agricultural Cooperative Federation ("NACF"), the trustee of Hana Daol Fund Management. 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 SK Group companies 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.
- 5) The Company has total return swap contracts in regards to SK Shipping Co., Ltd.'s issuance of ordinary shares and sale of existing shares, and details are as follows:

	<u>Subscription of new shares</u>	<u>Sale of existing shares</u>
Investor	Special Situation 1 <sup>st</sup> Fund	Corporate Turnaround 1 <sup>st</sup> 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 investor make a cash settlement of the amount that deducts the issue price from the net selling price. If the amount is positive, the investor pays to the Company, and if the amount is negative, the Company pays to the investor. In case where the sale is not complete, the selling price of the shares is considered to be nil.	
Premium	The Company pays to the investor the amount equivalent to 3.14% of the total shares held by the investor annually. When the investor receives dividends on the shares held, the amount is paid to the Company.	
Call option	The Company has the right to purchase the shares held by the investor at the issued price of the ordinary shares with certain level of additional charges.	

**34. Commitments and contingencies (cont'd)**

- 6) The Group entered into total return swap contracts with ordinary shareholders of SK Siltron Co., Ltd., one of the subsidiaries. Details are as follows:

	Total return swap
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 are to settle the amount that deducts the issue price from the net selling price. If the amount is positive, the investor pays to the Company, and if the amount is negative, the Company pays to the investor. In case where the sale is not complete, the selling price of the shares is considered to be nil.
Premium	The Company is to pay 0.5% of the initial contract amount at the closing date of the transaction and pay to the investor the amount equivalent to 3.20% of the total shares held by the investors annually. When the investor receives dividends on the shares held, the amount is 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 investor at the initial contract price of the ordinary shares with a certain level of additional charges.

As of December 31, 2019, the value of the agreements amounting to ₩169,131 million is recognized in long-term borrowings (see Note 16).

- 7) The Group entered into total return swap contracts with ordinary shareholders of SK E&S Co., Ltd., one of the subsidiaries. Details are as follows.

	Total return swap
Investor	MD Prime 1st Co., Ltd.
Number of shares	4,640,199
Contract date	November 14, 2017
Expiry date	November 13, 2022
Settlement	The Company and the investors are to settle the amount that deducts the issue price from the net selling price. If the amount is positive, the investor pays to the Company, and if the amount is negative, the Company pays to the investor. In case where the sale is not complete, the selling price of the shares is considered to be nil.
Premium	The Company is to pay to the investor the amount equivalent to 3.07% of the total shares held by the investors annually. When the investor receives dividends on the shares held, the amount is 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 investor at the initial contract price of the ordinary shares with a certain level of additional charges.

As of December 31, 2019, the value of the agreements amounting to ₩677,775 million is recognized in long-term borrowings (see Note 16).

- 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.



**34. Commitments and contingencies (cont'd)**

- 9) The Company entered into a cash deficiency support agreement with Abrasax Investment Inc., a subsidiary of SK Pharmteco Inc. (formerly, Alchemy Acquisition Corp.), to lend funds for the shortfall of payment for loans and credit of up to USD 315,000 thousand.
- 10) As of December 31, 2019, the Company and SK Innovation Co., Ltd., SK E&S Co., Ltd. and Prism Energy International Pte. Ltd., subsidiaries of the Group, have provided a performance guarantee contract for the acquisition of SK Shipping Co., Ltd.'s BBCHP. However, considering the fair value of SK Shipping Co., Ltd.'s vessel provided as collateral for the BBCHP contract, the Group determines that there is no actual guarantee amount.
- 11) SK E&S LNG, LLC, one of the subsidiaries, is scheduled to be provided with liquefaction service for 20 years from FLNG Liquefaction 3, LLC, Which plans to operate natural gas liquefaction plants in Texas starting from 2019. As of December 31, 2019, 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.
- 12) As of December 31, 2019, details of contracts of the subsidiaries of SK E&S Co., Ltd. are as follows:

Description of contract	Name of subsidiaries	Counterparty	Term of contract
Contract for the supply of long-term natural gas (*1)	Kangwon City Gas Co., Ltd. and 7 subsidiaries	Korea Gas Corporation	-
Contract of supply for natural gas	SK E&S Co., Ltd.	Tanggung PSC Contractor Parties	2006.01 ~ 2026.07
Contract for the repair and maintenance of gas turbine	SK E&S Co., Ltd.	GE International Inc.	2004.06 ~ 2026.12 (estimated)
Contract for the storage and vaporization service of natural gas	SK E&S Co., Ltd.	POSCO Co., Ltd.	2005.06 ~ 2025.12
Rental contract of the plant and tower site	SK E&S Co., Ltd.	POSCO Co., Ltd.	2003.08 ~ 2028.12
Contract for the long term maintenance program	Paju Energy Service Co., Ltd.	Siemens AG and others	2014.06 ~ 2031.06 (estimated)
Contract for the long term maintenance program	Wirye Energy Service Co., Ltd.	Siemens Ltd. Seoull	2015.01 ~ 2032.01 (estimated)
Contract for the long term maintenance program	Narae Energy Service Co., Ltd.	Doosan Heavy Industries & Construction Co., Ltd.	12 years from 2012
Contract for the liquefaction and storage of natural gas	SK E&S LNG, LLC	FLNG Liquefaction 3, LLC	20 years from 2019
Contract for the use plumbing system	Wirye Energy Service Co., Ltd. and Paju Energy Service Co., Ltd.	Korea Gas Corporation Co., Ltd.	20 years from 2017
Contract for the use pipeline of natural gas	SK E&S LNG, LLC	Kinder Morgan, Inc.	20 years from 2019
Contract for the storage and vaporization service of natural gas	SK E&S Co., Ltd., Wirye Energy Service Co., Ltd. and Paju Energy Service Co., Ltd.	Boryeong LNG Terminal Co., Ltd.	20 years from 2017
Contract of supply for natural gas	Prism Energy International Pte. Ltd.	Chevron Australia Pty. Ltd. and others	2017.01 ~ 2022.03
Time charter contract	Prism Energy International Pte. Ltd.	SK Shipping Co., Ltd.	20 years from ship delivery date
Contract for operation and maintenance	Narae Energy Service Co., Ltd.	Jeonbuk Co-generation, Gimcheon Energy Service Co., Ltd.	2015.01 ~ 2025.01
Contract of supply for long-term natural gas	Narae Energy Service Co., Ltd.	Korea Gas Corporation	20 years from 2015.05
Co-existence agreement business	Paju Energy Service Co., Ltd.	SK Engineering & Construction Co., Ltd. and others	2018.05 ~ 2020.04
Contract for rent a ship	Prism Energy International Pte. Ltd.	Shell Tankers (Singapore) Private Limited.	2019.05 ~ 2020.02
Lease contract	Pusan City Gas Co., Ltd.	Megamart and others	Until 2022
Contract for sales of REC	SK E&S Co., Ltd.	Godeok Green Energy Co., Ltd. and others	20 years from contract date
Contract for sales of REC	Paju Energy Service Co., Ltd.	GeoGeum Solar Park Co., Ltd. and others	15 years from 2018
Contract for LTSA	Yeoju Energy Service Co., Ltd.	Siemens AG, Siemens Ltd. Seoul	2019.12 ~ 2047.12 (estimated)
Contract for construction of Yeoju power plant, facilities	Yeoju Energy Service Co., Ltd.	Korea Electric Power Corporation	2019.12 ~ 2021.05
Contract for steam supply	Chungcheong Energy Service Co., Ltd.	Jinju Industry Co., Ltd. and others	20 years from commercial operating date

(\*1) The Company has signed a contract with Korea Gas Corporation for natural gas supply for 20 years.

**34. Commitments and contingencies (cont'd)**

- 13) As of December 31, 2019, details of construction contracts about the subsidiaries of SK E&S Co., Ltd. are as follows (Korean won in millions):

Description of contract	Name of subsidiaries	Contract opponent	Term of contract	Amount
Contract for heat piping and others	Narae Energy Service Co., Ltd.	Eulmyo general construction Co., Ltd. and others	2018.09 ~ 2020.10	₩ 12,526
Contract for the transmission access construction	Wirye Energy Service Co., Ltd.	Daekyoung Eneritech Co., Ltd.	2019.05 ~ 2020.04	₩ 1,742

- 14) As of December 31, 2019, details of material contracts of resource development by the subsidiaries of SK E&S Co., Ltd. are as follows (Foreign currencies in thousands):

Description of contract	Name of subsidiaries	Counterparty	Equity ownership	Contract amount	Executive amount
Barossa-Caldita, Australia (*1)	SK E&S Australia Pty. Ltd.	Conoco Phillips Company and others	37.5%	USD 310,000	USD 310,000
Woodford, USA (*1)	Dew Blaine Energy, LLC	Continental Resources, Inc.	49.9%	USD 360,000	USD 360,000

(\*1) The execution for contract amounts has been completed during the current reporting period.

SK E&S Co., Ltd., a subsidiary of the Group, has an obligation to pay for the development costs based on the equity ownership.

- 15) SK Incheon Perochemical Co., Ltd., one of subsidiaries, securitized ₩189,000 million of SK Incheon Petrochemical Co., Ltd.'s trusts accounts receivable for SK Energy Co., Ltd. and SK Global Chemical Co., Ltd., the other subsidiaries of the Group, to Industrial Bank of Korea. IPC Limited Company 1, which underwrites the first right to benefit issued by Industrial Bank of Korea, issues securitized commercial paper.
- 16) SK Telecom Co., Ltd., a subsidiary of the Group, sells its mobile handsets to customers on an installment payment plan through agents. SK Telecom Co., Ltd. entered into transfer agreements with the agents for the receivables of handset's installment payments, under which all the rights and obligations of the receivables are transferred to SK Telecom Co., Ltd.. Then, SK Telecom Co., Ltd. entered into an asset securitization contract with a special purpose company for the receivables, and accordingly, the balance of the receivables as of the end of the current reporting period is ₩646,837 million which is recorded as other receivables and long-term other receivables.
- 17) In accordance with a resolution of the Board of Directors on April 26, 2019, to enhance competitiveness and synergy as a comprehensive media provider, SK Broadband Co., Ltd., a subsidiary, has decided to merge with Tbroad Co., Ltd., Tbroad Dongdaemun Broadcasting Co., Ltd. and Korea Digital Cable Media Center Co., Ltd.. SK Broadband Co., Ltd. will be the surviving entity after the merger. The merged entities will be dismissed at the merger date scheduled for April 30, 2020. In addition, the transaction is completed to the conditional approval of government on January 21, 2020.
- 18) As of December 31, 2019, SK Materials Co., Ltd., a subsidiary, has a shareholders' agreement with Showa Denko K.K in respect to an investment in SK Showa Denko Co., Ltd., a subsidiary. Under this agreement, Showa Denko K.K holds a right to sell 630,000 shares (15%) of interests in SK Showa Denko Co., Ltd. at a par value of ₩5,000 to SK Materials Co., Ltd..
- 19) SK Air Gas Co., Ltd., a subsidiary, transferred trade receivables from SK Energy Co., Ltd. and SKC Co., Ltd. to trust account of Korea Development Bank in September 2018. In the same year, SK Materials Co., Ltd. entered into trade receivables securitization contract with Korea Development Bank in which ABCP is issued at par value of ₩25,000 million on a three-month basis based on type 1 beneficiary certificate. As of December 31, 2019 and 2018, trade receivables transferred to trust account are ₩ 3,938 million and ₩3,786 million, respectively.

**34. Commitments and contingencies (cont'd)**

20) SK Air Gas Co., Ltd., a subsidiary, trusted the trade receivable that may incur from project, of which the investment was in progress in September 2017, to the trust account of KEB Hana Bank. With this trusted amount as collateral, SK Materials Co., Ltd. entered into borrowing commitment for the facility for up to ₩120,000 million. As of December 31, 2019 and 2018, trade receivables transferred to trust account are ₩5,800 million and ₩17,173 million, respectively.

(5) On-site accident in Xe-pian Xe-Namnoy Hydropower dam project

In July 2018, Xe-Pian Xe-Namnoy Hydropower dam under construction by SK Engineering & Construction Co., Ltd., a subsidiary, was flooded resulting in a loss of Saddle D and auxiliary dam and a flashflood through villages downstream. SK Engineering & Construction Co., Ltd. reflected the costs associated with the restoration work and the costs incurred during the prior period due to relief and damage recovery activities for the victims in its financial statements. The Laos National Investigation Committee announced the result of the cause of the accident during the current period, but SK Engineering & Construction Co., Ltd. is trying to find a more objective and clear cause.

(6) Hybrid bonds

Details of hybrid bonds as of December 31, 2019 and 2018 are as follows (Korean won in millions):

Issue segment	Description	Issue date	Maturity date (*1)	Interest rate (%) (*2)	For the years ended	
					December 31, 2019	December 31, 2018
Group of SK Innovation	1st private equity bond type	2019.03.15	2049.03.15	4.20	₩ 600,000	₩ -
Group of SK Telecom	2-1 private equity bond type	2018.06.07	2078.06.07	3.70	300,000	300,000
	2-2 private equity bond type	2018.06.07	2078.06.07	3.65	100,000	100,000
Group of SK E&S	1st foreign currency type (*3)	2014.11.26	2074.11.26	-	-	329,520
	1-1 Korean currency type	2015.07.15	2045.07.15	3.90	270,000	270,000
	1-2 Korean currency type	2015.07.15	2045.07.15	3.85	130,000	130,000
	2nd Korean currency type	2019.10.11	2049.10.11	3.30	330,000	-

(\*1) The issuing company may decide on early repayment and extension of maturity date when certain period is lapsed.

(\*2) After a certain period from the issue date, the interest rate will fluctuate in accordance with the contract.

(\*3) The Group made early repayment during the current reporting period.

(7) Others

As of December 31, 2019, 72 notes (including 68 blank notes) and 53 blank checks are provided to financial institutions as collateral for borrowings.

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**35. Pledged assets**

The following assets were pledged as collateral for the Group's borrowings and others as of December 31, 2019 (Korean won in millions and foreign currencies in thousands):

Subsidiary	Asset	Currency	Collateralized amount (*1)	Provided to	Description
SK Innovation Co., Ltd.	Investments in associates	KRW	-	Yemen LNG Company's share lender	Collateral for PF
Netruck Co., Ltd.	Property, plant and equipment	KRW	4,500	Shinhan Bank	Collateral for borrowing
SK Broadband Co., Ltd.	Property, plant and equipment	KRW	4,013	Lessor	Restricted real rights for office lease
Incross Co., Ltd.	Financial instruction	KRW	14,492	Naver Co., Ltd. and others	Performance guarantees for contract
SK Bioland Co., Ltd.	Property, plant and equipment	KRW	40,500	Korea Development Bank	Collateral for borrowing
SK Networks Co., Ltd.	Property, plant and equipment and others	KRW	492,584	Korea Development Bank and others	Collateral for sales and others
SK Magic Co., Ltd.	Property, plant and equipment	KRW	123,500	Korea Development Bank and others	Collateral for borrowing
SK Rent a Car Co., Ltd.	Property, plant and equipment	KRW	477,567	Korea Development Bank and others	Collateral for borrowing
SK Telesys Co., Ltd.	Property, plant and equipment	KRW	19,500	KDB Capital Corporation and others	Collateral for borrowing
SKC Solmics Co., Ltd.	Property, plant and equipment	KRW	72,100	Korea Development Bank and others	Collateral for borrowing
Woori Fine Chem Co., Ltd.	Property, plant and equipment	KRW	6,480	Kookmin Bank and others	Collateral for borrowing
SKC, Inc.	Inventories and trade receivables	USD	19,000	Korea Development Bank and others	Collateral for borrowing
SK E&S Co., Ltd.	Property, plant and equipment	USD	70,000	Standed Chartered Bank	Collateral for borrowing
	Investments in associates	KRW	14,468	Shinhan Bank and others	Collateral for PF
	Investments in joint ventures	KRW	135,000	Woori Bank and others	Collateral for PF
Kangwon City Gas Co., Ltd.	Property, plant and equipment	KRW	5,254	Korea Development Bank	Collateral for borrowing
Pusan City Gas Co., Ltd.	Investment property	KRW	3,990	Megamart and others	Leasehold deposits
Paju Energy Service Co., Ltd.	Property, plant and equipment	KRW	360,000	Kookmin Bank and others	Collateral for borrowing
Chonnam City Gas Co., Ltd.	Property, plant and equipment	KRW	81	CJ Hello Vision Ara Broadcasting Co., Ltd.	Collateral for deposits received
Wirye Energy Service Co., Ltd.	Property, plant and equipment and others	KRW	84,000	Kookmin Bank and others	Collateral for borrowing
	Financial instruction	KRW	3,541	KEB Hana Bank	Collateral for guarantees of payment
Narae Energy Service Co., Ltd.	Property, plant and equipment and others	KRW	505,000	Korea Development Bank and others	Collateral for borrowing
SK Engineering & Construction Co., Ltd.	Investment securities and others	KRW	323,052	Korea Housing Guarantee Co., Ltd. and others	Collateral for borrowing and others
	Investment property	KRW	142,000	Kookmin Bank and others	Collateral for borrowing
Seosuwon Development Company	Property, plant and equipment and others	KRW	185,900	New West Village and others	Collateral for borrowing
SK China Company, Ltd.	Others	USD	33,887	Shinhan Bank and others	Collateral for borrowing
SK Industrial Development China Co., Ltd.	Others	CNY	2,000,000	Bank of China communications	Collateral for borrowing
SK Materials Co., Ltd.	Property, plant and equipment	KRW	13,585	LG Display Co., Ltd.	Collateral for advances received
		KRW	137,000	Korea Development Bank	Collateral for borrowing
		USD	3,500	Korea Development Bank	Collateral for borrowing
		JPY	3,690,000	Korea Development Bank	Collateral for borrowing
		JPY	315,000	MUFG Bank	Collateral for borrowing
		TWD	20,000	Mega Bank	Collateral for borrowing
		KRW	1,668	Yeongju city and Gyeongsang Buk-do	Government subsidy
SK Airgas Co., Ltd.	Property, plant and equipment and others	KRW	347,438	Kyungnam Bank and others	Collateral for borrowing
SK Siltron Co., Ltd.	Property, plant and equipment and others	KRW	301,047	Korea Development Bank and others	Collateral for borrowing

(\*1) The carrying amount of securities provided as collaterals for PF loans and facility borrowings are included.

Life & Security Holdings Co., Ltd., a subsidiary, provides its shares in ADT Caps Co., Ltd., Capstec Co., Ltd. and ADT Security Co., Ltd. as collateral for its long-term borrowing of ₩1,900,000 million.

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**36. Guarantees provided among the Group entities**

Guarantees provided among the Group entities as of December 31, 2019 are as follows (Korean won in millions and foreign currencies in thousands):

Guarantor	Guarantee	Currency	Amount	Description of guarantee
SK Holdings Co., Ltd.	Abrasax Investment Inc.	USD	315,000	Guarantee of debt
	Hudson Energy NY, LLC	USD	226,000	Guarantee of debt
SK Innovation Co., Ltd.	SK E&P America, Inc.	USD	70,000	Guarantee of debt
	SK Battery America, Inc.	USD	220,000	Guarantee of debt
	SK Battery Hungary Kft.	USD	220,000	Guarantee of debt
		HUF	9,810,000	Guarantee of local factory construction
	SK Hi-tech Battery Materials (Jiangsu) Co., Ltd.	USD	50,000	Guarantee of debt
	SK Hi-Tech Battery MATERIALS Poland	CNY	500,000	Guarantee of debt
	SK Ningbo Performance Rubber Co., Ltd.	USD	130,000	Guarantee of debt
SK Global Chemical Co., Ltd.	SK Global Chemical Americas, Inc.	USD	10,000	Guarantee of payment for license agreement
	SK Global Chemical Americas, Inc.	USD	160,000	Guarantee of payment for principal of debt
SK Lubricants Co., Ltd.	Iberian Lube Base Oils, S.A.	EUR	3,500	Guarantee of debt
SK Telink Co., Ltd.	ADT Caps Co., Ltd.	KRW	4	Performance guarantees for insurance and others
	SK Broadband Co., Ltd.	KRW	1,095	Performance guarantees for insurance and others
	Home & Service Co., Ltd.	KRW	1	Performance guarantees for insurance and others
SK Networks Co., Ltd.	SK Networks Deutschland GmbH	EUR	16,000	Standing surety for investee
	SK Networks Hong Kong Ltd.	USD	141,600	Standing surety for investee
	SK Networks (Shanghai) Co., Ltd.	USD	98,400	Standing surety for investee
		CNY	54,000	Standing surety for investee
	SK Networks Japan Co., Ltd.	JPY	1,700,000	Standing surety for investee
	SK Networks America, Inc.	USD	20,000	Standing surety for investee
	SK (Guangzhou) Metal Co., Ltd.	CNY	50,000	Standing surety for investee
	SK Networks (Xiamen) Steel Processing Center Co., Ltd.	CNY	107,600	Standing surety for investee
	PT. SK Networks Indonesia	USD	1,500	Standing surety for investee
	SK Networks Resources Australia Pty. Ltd.	AUD	35,000	Standing surety for investee
SKC Co., Ltd.	SKC, Inc.	USD	150,000	Guarantee of payment
	SKC (Jiangsu) High Tech Plastics Co., Ltd.	USD	71,450	Guarantee of payment
		CNY	306,000	Guarantee of payment
	SK Telesys Co., Ltd.	KRW	30,000	Guarantee of financial obligation
	SKC (Natong) PU Specialty Co., Ltd.	CNY	115,700	Guarantee of payment
	SKC (Natong) Semiconductor Materials Technology Co., Ltd.	CNY	32,000	Guarantee of payment
		USD	31,500	Guarantee of payment
SK Bioland Co., Ltd.	Bioland Haimen Co., Ltd.	CNY	154,400	Guarantee of payment
SKC Hi-Tech & Marketing Co., Ltd.	SKC Hi-Tech&Marketing (Suzhou) Co., Ltd.	CNY	141,400	Guarantee of debt
SK E&S Co., Ltd.	Caillip GAS Marketing, LLC	USD	116,000	Guarantee for derivative hedge and others
	SK E&S Australia Pty. Ltd.	USD	90,000	Guarantee of debt and others
	Paju Energy Service Co., Ltd.	KRW	500,000	Guarantee of debt and others
	Wirye Energy Service Co., Ltd.	KRW	280,000	Guarantee of debt and others
	Narae Energy Service Co., Ltd.	KRW	20,000	Deficiency support agreement for debt
	Prism Energy International Pte. Ltd.	USD	480,000	Guarantee for derivative hedge
	SK E&S LNG, LLC	USD	66,500	Guarantee for derivative hedge and others
SK E&S Americas, Inc.	SK E&S LNG, LLC	USD	9,342	Performance guarantee for LPG injection
	Caillip Gas Marketing, LLC	USD	25,000	Performance guarantee for purchase contract of Feed Gas
SK Engineering & Construction Co., Ltd.	Seosuwon Development Company	KRW	140,023	Guarantees for project financing
	SKEC Anadolu LLC	EUR	111,015	Performance guarantees for contract and others
		TRY	25,077	Guarantee of W/H Tax
	Silvertown Investco Limited.	GBP	11,599	Guarantee of financial obligation
	Sunlake Co., Ltd.	CAD	6,000	Guarantee of financial obligation
SK Materials Co., Ltd.	SK Materials Jiangsu Co., Ltd.	USD	43,400	Guarantee of debt
	SK Materials Taiwan Co., Ltd.	USD	3,000	Guarantee of debt
	SK Materials Japan Co., Ltd.	JPY	276,000	Guarantee of debt
SK China Company, Ltd.	SK (Beijing) Auto Rental Co., Ltd.	USD	12,901	Guarantee of debt
	SK (Shenyang) Auto Rental Co., Ltd.	USD	10,034	Guarantee of debt
	SK Rent-A-Car (Qingdao) Co., Ltd.	USD	8,801	Guarantee of debt
	SK Financial Leasing	USD	2,150	Guarantee of debt
SK Biotek Co., Ltd.	SK Biotek Ireland Limited.	USD	50,000	Guarantee for credit limit
		EUR	10,000	Performance guarantees

**37. Deposits restricted in use**

Deposits restricted in use as of December 31, 2019 and 2018 are as follows (Korean won in millions):

Account	Classification	Institution	December 31, 2019	December 31, 2018	Description of restriction
Cash and cash equivalents	Deposits relating to letter of credit and others	Suntrust bank and others	₩ -	₩ 1,045	Deposits and others
Short-term financial instruments	Charitable fund and others	Industrial Bank of Korea and others	178,207	167,183	Pledged on collateral and others
Long-term financial instruments	CO2 emission allowances fund and others	Samsung Securities and others	8,414	7,396	Money on deposits and others
Others	Refund guarantee and others	Korea Software Financial Cooperative and others	4,581	4,956	Deposits and others
			<u>₩ 191,202</u>	<u>₩ 180,580</u>	

### **38. Financial risk management**

Regarding financial instruments, the Group is exposed to a variety of financial risks: credit, liquidity and market. This note presents information related to risk exposures of the Group and the main objective, strategy, evaluation of risk, management process and capital management. Additional quantitative information is stated throughout the condensed consolidated financial statements.

#### **38.1 Financial risk management**

##### **38.1.1 Risk management activities**

The board of directors has overall responsibility for the establishment and oversight of the Group's risk management framework. The board of directors has established the risk management committee, which is responsible for developing and monitoring the Group's risk management policies. The risk management committee reports regularly to the board of directors on its activities. The Group audit committee is assisted in its oversight role by internal audit.

Internal audit undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Group audit committee. The Group's risk management policies are established to identify and analyze the risks faced by the Group, to set appropriate risk limits and controls and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

##### **38.1.2 Credit risk**

Credit risk is the risk of financial loss of the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations. In addition, the maximum exposure to credit risk as of December 31, 2019 and 2018 is as follows (Korean won in millions):

	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Financial assets measured at FVTPL	₩ 5,164,770	₩ 5,610,720
Financial assets measured at FVOCI	24,047	27,351
Financial assets measured at amortized cost	22,034,353	20,584,179
Derivatives designated as hedging instruments	<u>178,446</u>	<u>97,247</u>
	<u>₩ 27,401,616</u>	<u>₩ 26,319,497</u>

On the other hand, the Group has provided payment guarantees for others including related parties, associates and others. The Group, due to its payment guarantees, is exposed to credit risk (See Note 34).

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**38.1.2.1 Trade and other receivables**

The Group enters into transactions only with customers that are credit worthy. Credit quality of a customer is assessed based on an extensive credit rating scored and individual credit limits are defined in accordance with this assessment. Outstanding customer receivables are regularly monitored and credit quality may be adjusted to reflect the appropriate appetite of credit risk in accordance with the Group's risk management policies.

The Group applies a simplification method that recognizes lifetime expected credit losses as a loss allowance for trade and other receivables. To measure expected credit losses, sales receivables and contract assets were divided based on credit risk characteristics and past due dates.

As of December 31, 2019 and 2018, the aging of trade receivables and other receivables for which a loss allowance has not been accrued, 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, 2019		December 31, 2018	
	Trade receivables	Other receivables	Trade receivables	Other receivables
Less than one month	₩ 549,889	₩ 78,841	₩ 321,506	₩ 46,073
One~three months	282,514	37,722	416,522	35,041
Three~six months	105,820	45,039	87,591	19,338
More than six months	354,761	319,502	343,385	368,339
	<u>₩ 1,292,984</u>	<u>₩ 481,104</u>	<u>₩ 1,169,004</u>	<u>₩ 468,791</u>

Changes in the loss allowance on trade receivables and others for the years ended December 31, 2019 and 2018 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2019	December 31, 2018
Beginning balance	₩ 790,620	₩ 716,879
Effect of changes in accounting policies	-	26,459
Bad debt expense	181,731	163,308
Write-off	(122,990)	(234,304)
Others (*1)	44,118	118,278
Ending balance	<u>₩ 893,479</u>	<u>₩ 790,620</u>

(\*1) Others include net foreign currency translation differences, changes in the scope of consolidation and others.

**38.1.2.2 Guarantee**

SK Engineering & Construction Co., Ltd., one of the subsidiaries, offers payment guarantees for loans of project financing. The financing liabilities related to the payment guarantees recognized are ₩15,006 million as of December 31, 2019. The Group recognizes the financial guarantee liabilities related to the payment guarantees contracted with the Group, such as SK Engineering & Construction Co., Ltd., as of December 31, 2019.

	December 31, 2019	December 31, 2018
SK Innovation Co., Ltd.	₩ 252	₩ 721
SK Engineering & Construction Co., Ltd.	15,006	15,161
SK Biotek Co., Ltd.	656	389
	<u>₩ 15,914</u>	<u>₩ 16,271</u>

In addition, the Group has provided payment guarantees for others, including subsidiaries and others. (See Notes 34 and 36).

### 38.1.2.3 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 Group will be the same as the book value of the maximum applicable financial instruments. On the other hand, the management of the Group'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 Group.

### 38.1.3 Liquidity risk

Liquidity risk is the risk that the Group encounters difficulty in meeting the obligations of the financial liabilities. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The contractual maturity of financial liabilities as of December 31, 2019 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
Borrowings	₩ 14,762,038	₩ 16,285,432	₩ 5,873,507	₩ 3,589,797	₩ 6,388,016	₩ 434,112
Bonds	29,530,202	32,402,799	1,727,528	3,333,958	20,139,000	7,202,313
Derivative financial liabilities	290,712	290,712	25,691	18,896	245,290	835
Trade payables	8,812,247	8,812,247	8,591,754	218,102	2,391	-
Lease liabilities	4,069,243	4,828,480	665,388	977,837	2,456,507	728,748
Other liabilities	9,345,914	10,029,956	6,766,537	1,183,292	1,457,384	622,743
	<u>₩ 66,810,356</u>	<u>₩ 72,649,626</u>	<u>₩ 23,650,405</u>	<u>₩ 9,321,882</u>	<u>₩ 30,688,588</u>	<u>₩ 8,988,751</u>

### 38.1.4 Market risk

Market risk is the fluctuating risk in fair value of the financial instruments or future cash flows caused by the changes in market price. Market risk consists of currency risk, interest rate risk, crude oil and petroleum product price risk, and others. The fundamental goal of market price management is the maximization of the profit and the limit of the exposure to market risk within an acceptable level. The Group sells and purchases financial derivatives and financial instruments or financial liabilities for the purpose of controlling the market risk. In general, the Group applies hedge accounting in order to minimize the volatility of profit.



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**38.1.4.1 Currency risk**

The Group is exposed to foreign currency risk arising from sales and purchases denominated in currencies other than functional currency. Main currencies used for these transactions are USD, JPY, CNY and EUR.

Details of foreign currencies and liabilities as of December 31, 2019 and 2018 are as follows (Korean won in millions and foreign currencies in thousands):

	Currency	December 31, 2019		December 31, 2018	
		Foreign currencies	Korean won equivalent	Foreign currencies	Korean won equivalent
Assets	USD	6,397,693	₩ 7,407,249	6,428,714	₩ 7,187,945
	JPY	15,334,962	163,083	19,169,337	194,220
	CNY	2,740,998	454,293	1,937,077	315,279
	EUR	183,935	238,642	233,106	298,180
	Others		332,025		337,851
			₩ 8,595,292		₩ 8,333,475
Liabilities	USD	9,848,768	₩ 11,402,904	9,424,582	₩ 10,537,626
	JPY	5,273,049	56,077	5,009,387	50,754
	CNY	1,968,261	326,220	1,983,852	322,892
	EUR	207,774	269,572	188,265	240,821
	Others		535,864		142,968
			₩ 12,590,637		₩ 11,295,061

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

Currency	December 31, 2019		December 31, 2018	
	Increase by 10%	Decrease by 10%	Increase by 10%	Decrease by 10%
USD	₩ (399,566)	₩ 399,566	₩ (334,968)	₩ 334,968
JPY	10,701	(10,701)	14,347	(14,347)
CNY	12,807	(12,807)	(761)	761
EUR	(3,093)	3,093	5,736	(5,736)

The Group is hedging currency risk by using derivative financial instruments such as currency swaps, currency forwards and others (See Note 21).

**38.1.4.2 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 Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates. As of December 31, 2019, floating-rate bonds payable and floating-rate borrowings are ₩3,088,640 million (December 31, 2018: ₩3,483,101 million). The Group's management has entered into the foreign currency swap and interest rate swap contracts to manage its interest rate risk (See Note 21).

When all other variables are fixed and the interest rates are changed for the years ended December 31, 2019 and 2018, the effects of interest expense by fluctuated interest-bearing loan are as follows (Korean won in millions):

	For the years ended			
	December 31, 2019		December 31, 2018	
Interest expenses	100 basis point increase	₩ 30,886	100 basis point increase	₩ 34,831

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**38.1.4.3 Crude oil and petroleum product price risk**

Crude oil and petroleum product price risk is the risk that profit or cash flow will fluctuate because of changes in international market prices of crude oil and petroleum products. The Group manages these risks to maintain stable margins through the use of fixed-price contracts with customers and derivative contracts of fluctuations in fair values according to changes in international market prices. Key management of the Group determined that the risk from changes in the price of crude oil and petroleum products and the risk to fluctuations in fair values are approximately managed.

**38.1.5 Enforceable master netting agreement or similar agreement**

Carrying amount of financial instruments recognized for which offset agreements are applicable as of December 31, 2019 and 2018 is as follows (Korean won in millions):

	December 31, 2019					
	Gross financial instruments recognized	Gross offset financial instruments recognized	Net financial instruments presented in the consolidated statement of financial position	Relevant amount not offset in the consolidated statement of financial position		Net amount
				Financial instruments	Cash collaterals received	
Financial assets:						
Trade receivables and other receivables	₩ 102,240	₩ (100,895)	₩ 1,345	₩ -	₩ -	₩ 1,345
Financial liabilities:						
Other payables and other liabilities	₩ 100,895	₩ (100,895)	₩ -	₩ -	₩ -	₩ -
	December 31, 2018					
	Gross financial instruments recognized	Gross offset financial instruments recognized	Net financial instruments presented in the consolidated statement of financial position	Relevant amount not offset in the consolidated statement of financial position		Net amount
				Financial instruments	Cash collaterals received	
Financial assets:						
Derivatives (*1)	₩ 1,867	₩ -	₩ 1,867	₩ (1,107)	₩ -	₩ 760
Trade receivables and other receivables	95,990	(95,920)	70	-	-	70
	<u>₩ 97,857</u>	<u>₩ (95,920)</u>	<u>₩ 1,937</u>	<u>₩ (1,107)</u>	<u>₩ -</u>	<u>₩ 830</u>
Financial liabilities:						
Derivatives (*1)	₩ 1,107	₩ -	₩ 1,107	₩ (1,107)	₩ -	₩ -
Other payables and other liabilities	95,920	(95,920)	-	-	-	-
	<u>₩ 97,027</u>	<u>₩ (95,920)</u>	<u>₩ 1,107</u>	<u>₩ (1,107)</u>	<u>₩ -</u>	<u>₩ -</u>

(\*1) Derivatives are subject to enforceable master netting arrangement in accordance with ISDA (International Swaps and Derivative Association).

**38.2 Capital risk management**

The fundamental goal of capital management is to keep a sound financial structure. The Group is using the debt ratio, calculated as total debt divided by total amount of capital, as an indicator of capital management. The Group maintains a debt ratio of 153.0% as of December 31, 2019. The maturity of the debt is dispersed in the long term; so, debt-repayments are not demanding.

The Group's debt ratio as of December 31, 2019 and 2018 is as follows (Korean won in millions):

	December 31, 2019		December 31, 2018	
Total liabilities	₩	79,838,041	₩	68,569,119
Total equity		52,182,635		50,887,872
Debt ratio		153.0%		134.7%

### 39. Business combination

#### 39.1 2019

##### (1) General information

SK Networks Co., Ltd., a subsidiary, acquired 9,353,660 shares (equity ownership of 42.24%) of SK Rent-a-Car Co., Ltd. (formerly, AJ Rent a Car Co., Ltd.)'s ordinary share on January 2, 2019 according to the Board of Directors resolution on September 21, 2018 to enhance competitiveness and accelerate growth of its future mobility business through the reorganization of the rental car industry. Meanwhile, the acquisition was accounted for by the acquisition method, and the consolidated financial statements contain financial performance of the SK Rent-a-Car Co., Ltd. (formerly, AJ Rent a Car Co., Ltd.) from the acquisition date to the end of the current period.

##### (2) Identifiable assets acquired and liabilities assumed

1) Identifiable assets acquired and liabilities assumed due to merger are as follows (Korean won in millions):

	SK Rent-a-Car Co., Ltd. (formerly, AJ Rent a Car Co., Ltd.)
Current assets:	₩ 94,880
Cash and cash equivalents	23,202
Trade and other receivables	54,117
Inventories	7,788
Other current assets	9,773
Non-current assets:	1,173,753
Property, plant and equipment	1,034,434
Right-of-use assets	72,532
Intangible assets	25,358
Other non-current assets	41,429
Current liabilities:	624,390
Trade and other payables	53,006
Current lease liabilities	27,062
Other current liabilities	544,322
Non-current liabilities:	378,407
Lease liabilities	46,891
Deferred tax liabilities	1,265
Other non-current liabilities	330,251
Fair value of identifiable net assets	<u>₩ 265,836</u>

2) Valuation techniques used for remeasurement at fair value of acquired significant assets and liabilities are as follow:

Acquired Assets	Measurement of fair value
Property, plant and equipment	Market approach or cost approach: The Group determines the fair value reflecting on the created price in the available market transactions of similar assets or on the replacement cost considering the appropriate functional and economic obsolescence as well as the physical deterioration degree.
Intangible assets	Relief from royalty method: The Group determines the fair value of intangible assets by using relief from royalty method considering the royalty discount that is expected to be avoided by the retention of the patents or trademarks directly.
Bonds payable and borrowings	Effective interest method: The Group determines the fair value by discounting future cash flows at an effective interest rate considering unsecured discount rate corresponding to current credit rating as of assessment date.

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**39.1. 2019 (cont'd)**

3) Goodwill arising from business combination is as follows (Korean won in millions):

	SK Rent-a-Car Co., Ltd. (formerly, AJ Rent a Car Co., Ltd.)	
a. The total consideration transferred	₩	295,809
b. Fair value of proportionate share of acquired net assets:		
Fair value of the net identifiable assets		265,836
Non-controlling interests (*1)		(153,547)
		<u>112,289</u>
c. Goodwill (c=a-b)	₩	<u>183,520</u>

(\*1) Non-controlling interests arising from the merger are measured in proportion to the non-controlling interests in identifiable net assets of the merged company.

4) The consolidated financial statements for the years ended December 31, 2019 include sales of ₩640,883 million and profit for the year of ₩15,575 million related to additional business generated by the subsidiary, acquired by the business combination after the acquisition date.

**39.2 2018**

(1) Dow Chemical EAA Business

In accordance with the resolution of the Board of Directors on February 1, 2017, SK Global Chemical Co., Ltd., one of the subsidiaries, acquired all of the Dow Chemical Company's EAA businesses in U.S. and Spain and the related tangible and intangible assets and completed the acquisition during the year ended December 31, 2017, for diversifying its business portfolio into a higher value-added packaging field. At the date of acquisition, the fair value of tangible and intangible assets was determined provisionally because the independent valuation was not completed. For the years ended December 31, 2018, the Group subsequently adjusted the amount of its identifiable net assets recognized at the date of acquisition by obtaining new information on the pertinent fact and circumstances that existed on the date of acquisition. The details of the business combination for the Dow Chemical EAA project are as follows:

1) Fair value of consideration transferred in the business combination is as follows (Korean won in millions):

	Before adjustment	Adjustment	After adjustment
Cash	₩ 394,463 ₩	(1,792) ₩	₩ 392,671

2) Identifiable assets acquired and liabilities assumed due to merger are as follows (Korean won in millions):

	Before adjustment	Adjustment	After adjustment
Fair value of identifiable assets:	₩ 294,183 ₩	10,246 ₩	₩ 304,429
Current assets:	43,862	252	44,114
Trade and other receivables	12,742	-	12,742
Inventories	31,120	252	31,372
Non-current assets:	250,321	9,994	260,315
Property, plant and equipment	56,683	(364)	56,319
Intangible assets	193,638	10,358	203,996
Fair value of identifiable liabilities:	-	-	-
Fair value of identifiable net assets	<u>₩ 294,183 ₩</u>	<u>10,246 ₩</u>	<u>₩ 304,429</u>

**39.2 2018 (cont'd)**

3) Goodwill arising from business combination is as follows (Korean won in millions):

	Before adjustment	Adjustment	After adjustment
a. The total consideration transferred	₩ 394,463	₩ (1,792)	₩ 392,671
b. Less: fair value of the net identifiable assets	(294,183)	(10,246)	(304,429)
c. Goodwill	<u>₩ 100,280</u>	<u>₩ (12,038)</u>	<u>₩ 88,242</u>

4) Net cash outflow from business combination is as follows (Korean won in millions):

	Before adjustment	Adjustment	After adjustment
Payment by cash	₩ 394,463	₩ (1,792)	₩ 392,671
Less: acquisition of cash and cash equivalents	-	-	-
Net cash outflow	<u>₩ 394,463</u>	<u>₩ (1,792)</u>	<u>₩ 392,671</u>

(2) Dow Chemical PVDC Business

As a subsidiary, SK Global Chemical decided to acquire the entire PVDC business in the United States owned by The Dow Chemical Company and all its tangible and intangible assets in order to diversify its packaging business portfolio. On the acquisition date, the fair value of tangible and intangible assets was determined provisionally because the independent valuation was not completed. For the years ended December 31, 2018, the Group subsequently adjusted the amount of its identifiable net assets recognized at the date of acquisition by obtaining new information on the pertinent fact and circumstances that existed on the date of acquisition. The details of the business combination for the Dow Chemical PVDC project are as follows:

1) Fair value of consideration transferred in the business combination is as follows (Korean won in millions):

	Before adjustment	Adjustment	After adjustment
Cash	₩ 82,193	₩ -	₩ 82,193
Contingent consideration	-	(15,964)	(15,964)
Total	<u>₩ 82,193</u>	<u>₩ (15,964)</u>	<u>₩ 66,229</u>

2) Identifiable assets acquired and liabilities assumed due to merger are as follows (Korean won in millions):

	Before adjustment	Adjustment	After adjustment
Fair value of identifiable assets:	₩ 26,071	₩ 22,216	₩ 48,287
Current assets:	11,881	85	11,966
Trade and other receivables	3,365	(917)	2,448
Inventories	8,516	1,002	9,518
Non-current assets:	14,190	22,131	36,321
Property, plant and equipment	14,190	11,091	25,281
Intangible assets	-	11,040	11,040
Fair value of identifiable liabilities:	-	(6,544)	(6,544)
Other payables	-	(8)	(8)
Long-term other payables	-	(6,536)	(6,536)
Fair value of identifiable net assets:	<u>₩ 26,071</u>	<u>₩ 15,672</u>	<u>₩ 41,743</u>

**39.2 2018 (cont'd)**

3) Goodwill arising from business combination is as follows (Korean won in millions):

	Before adjustment	Adjustment	After adjustment
a. The total consideration transferred	₩ 82,193	₩ (15,964)	₩ 66,229
b. Less: fair value of the net identifiable assets	(26,071)	(15,672)	(41,743)
c. Goodwill	<u>₩ 56,122</u>	<u>₩ (31,636)</u>	<u>₩ 24,486</u>

4) Net cash outflow from business combination is as follows (Korean won in millions):

	Before adjustment	Adjustment	After adjustment
Payment by cash	₩ 82,193	₩ -	₩ 82,193
Less: acquisition of cash and cash equivalents	-	-	-
Net cash outflow	<u>₩ 82,193</u>	<u>₩ -</u>	<u>₩ 82,193</u>

(3) SK Showa Denko Co., Ltd. and others

1) General information

The Group acquired control of the investee by holding a majority of the voting rights of corporation and the board of directors of SK Showa Denko Co., Ltd. during the 2018 reporting period. The acquisition is accounted for using the acquisition method. The quarterly consolidated financial statements include the financial results of SK Showa Denko Co., Ltd. from the acquisition date to the end of the 2018 reporting period.

During the years ended December 31, 2018, the Group acquired additional 41,157,506 shares which resulted in the Group obtaining control over id Quantique SA with 44,157,506 shares in cash of ₩ 55,249 million and 58.1% ownership of the outstanding shares, in aggregate. Taking control of id Quantique SA will enable the Group to increase its corporate value as the leading mobile telecommunication operator in Korea and to generate profit in overseas markets by utilizing quantum cryptographic security. In addition, the Group acquired 16,666,666 additional shares with a spot investment of ₩5,672 million in assets during the current period. The equity ratio has increased to 65.6% due to this spot investment. The quarterly consolidated financial statements include the financial results of id Quantique SA from the acquisition date to the end of the 2018 reporting period.

SK E&P America, Inc., a subsidiary of the Group, acquired all of the shares of Longfellow Nemaha, LLC for the years ended December 31, 2018 and changed its name to SK Nemaha, LLC after the acquisition. The shares acquired are 50% of the shares of production oil field which is located in Oklahoma. The Group completed the acquisition on June 5, 2018 and total acquisition cost of ₩310,682 million (USD 290 million) was paid by cash. Further, goodwill did not occur in the business combination.

The Group acquired 100% equity shares in Fine Chemicals Holdings Corp., the parent company of AMPAC (Contract Manufacturing Organization or CMO), in order to increase the synergy effect in the bio business for the years ended December 31, 2018. The acquisition was accounted for using the acquisition method, and the consolidated financial statements include the financial performance of Fine Chemicals Holdings Corp. from the acquisition date to the 2018 reporting period.

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**39.2 2018 (cont'd)**

On May 8, 2018, SK Telecom Co., Ltd. entered into an agreement to acquire 740,895 shares of Life and Security Holdings Co., Ltd., at ₩696,665 million to strengthen its security business as well as to expand the residential customer base. On October 1, upon completion of share acquisition, SK Telecom Co., Ltd. acquired 55% equity share in Life and Security Holdings Co., Ltd.. Also, SK Telecom Co., Ltd. has acquired control over ADT Caps Co., Ltd., security service provider and two other subsidiaries of Life and Security Holdings Co., Ltd.. The consolidated financial statements include the financial results of Life and Security Holdings Co., Ltd. from the acquisition date to the end of the 2018 reporting period.

2) Identifiable assets acquired and liabilities assumed due to merger are as follows (Korean won in millions):

	SK Showa Denko Co., Ltd.	id Quantique SA	Longfellow Nemaha, LLC	AMPAC LLC	Life & Security Holdings Co., Ltd.
Current assets:	₩ 10,137	₩ 17,276	₩ -	₩ 143,346	₩ 148,378
Cash and cash equivalents	6,332	1,538	-	24,322	101,896
Trade and other receivables	1,375	13,609	-	91,128	40,241
Inventories	501	2,003	-	25,529	2,440
Other current assets	1,929	126	-	2,367	3,801
Non-current assets:	17,244	8,302	315,836	450,274	1,447,410
Property, plant and equipment	17,242	415	-	155,688	427,752
Intangible assets	-	7,566	315,782	288,850	1,019,503
Other non-current assets	2	321	54	5,736	155
Current liabilities:	6,495	2,801	551	97,550	368,543
Trade and other payables	6,492	1,569	-	12,858	296,660
Other current liabilities	3	1,232	551	84,692	71,883
Non-current liabilities:	1	1,648	4,603	208,591	2,060,205
Defined benefit liabilities	1	-	-	16,853	78,209
Deferred tax liabilities	-	1,648	-	52,210	229,207
Other non-current liabilities	-	-	4,603	139,528	1,752,789
Fair value of identifiable net assets	₩ 20,885	₩ 21,129	₩ 310,682	₩ 287,479	₩ (832,960)

3) Goodwill arising from business combination is as follows (Korean won in millions):

	SK Showa Denko Co., Ltd.	id Quantique SA	Longfellow Nemaha, LLC (*1)	AMPAC LLC (*1)	Life & Security Holdings Co., Ltd.
a. The total consideration transferred					
Consideration transferred	₩ 10,651	₩ 55,249	₩ 310,682	₩ 623,652	₩ 696,665
Fair value of the share holding transferred	-	3,965	-	-	-
	10,651	59,214	310,682	623,652	696,665
b. Fair value of proportionate share of acquired net assets					
Fair value of the net identifiable assets	₩ 20,885	₩ 21,129	₩ 310,682	₩ 287,479	₩ (832,960)
Non-controlling interests (*1)	(10,234)	(9,290)	-	-	374,588
	10,651	11,839	310,682	287,479	(458,372)
C. Goodwill	-	₩ 47,375	-	₩ 336,173	₩ 1,155,037

(\*1) Non-controlling interests arising from the merger are measured in proportion to the non-controlling interests in identifiable net assets of the merged company.

#### **40. Subsequent events**

##### **40.1 Additional capital increase in SK South East Asia Investment Pte. Ltd.**

The Group has determined to make additional capital increase in SK South East Asia Investment Pte. Ltd. The estimated investment amount will be USD 100 million for SK Holdings Co., Ltd., SK Innovation Co., Ltd., SK Telecom Co., Ltd. and SK E&S Co., Ltd., respectively, and the capital increase will commence during 2020.

##### **40.2 SK Innovation Co., Ltd.'s in-kind contribution**

In accordance with a resolution of Board of Directors on October 23, 2019, SK Innovation Co., Ltd., a subsidiary of the Group, will participate in an additional capital increase of SK IE Technology Co., Ltd. through contribution-in-kind of its 100% equity ownerships in SK Hi-tech Battery Materials (Jiang su) Co., Ltd. and SK Hi-tech Battery Materials Poland Sp. Z.o.o. on January 1, 2020.

##### **40.3 SK Innovation Co., Ltd.'s acquisition of treasury shares**

SK Innovation Co., Ltd., a subsidiary of the Group, decided to acquire treasury share in accordance with a resolution of Board of Directors on January 31, 2020, to stabilize share prices and enhance shareholders' value. The expected number of shares to be acquired is 4,628,000 ordinary shares, and the expected end date of acquisition is May 2, 2020. SK Innovation Co., Ltd. will retain the treasury shares for more than six months from the date of its acquisition.

##### **40.4 SK Innovation Co., Ltd.'s litigation**

As described in Note 34, on April 29, 2019, LG Chem Ltd. and others (collectively referred to as "LGC") filed a lawsuit against SK Innovation Co., Ltd. and SK Battery America, Inc. (collectively referred to as "SKI"), the subsidiaries of the Group, regarding an infringement of its electric battery trade secrets and instituted a request to the U.S. International Trade Commission (ITC) for ban on the import of lithium ion battery and others. On November 5, 2019, LGC requested a default judgment to ITC over an incomplete fulfillment of evidence preservation obligation breached by SKI during the litigation process. On February 14, 2020, the ITC made a default judgment against SKI in a lawsuit without holding additional hearings for the infringement of trade secrets. According to the ITC's announcement, the final decision is to be made in October 2020.

##### **40.5 SK Networks Co., Ltd.'s acquisition of treasury shares**

SK Networks Co., Ltd., a subsidiary of the Group, decided to acquire treasury share in accordance with a resolution of Board of Directors on March 4, 2020, to stabilize share prices and enhance shareholders value. The expected number of shares to be acquired is 22,000,000 ordinary shares and 10,500 other shares, and the expected end date of acquisition is June 4, 2020. SK Networks Co., Ltd. will retain the treasury shares for more than six months from the date of its acquisition.

##### **40.6 SKC Co., Ltd.'s acquisition of KCF Technologies Co., Ltd.**

SKC Co., Ltd., a subsidiary of the Group, decided to acquire shares of KCF Technologies Co., Ltd. in accordance with a resolution of Board of Directors on June 13, 2019, to launch and expansion to the mobility business. Also, SKC Co., Ltd. decided to transfer its buyer status to SKCFT Holdings Co., Ltd., a subsidiary of the Group, in accordance with a resolution of Board of Directors on December 31, 2019. The share transfer will be completed on January 7, 2020.

##### **40.7 SKC Co., Ltd.'s disposal of SKC Kolon PI Co., Ltd.**

SKC Co., Ltd., a subsidiary of the Group, decided to disposed of its shares in SKC Kolon PI Co., Ltd. in accordance with a resolution of Board of Directors on December 24, 2019. The disposition will be completed on March 6, 2020.



#### **40.8 SK Siltron Co., Ltd.'s acquisition of business**

SK Siltron Co., Ltd., a subsidiary of the Group, decided to acquire SiC Wafer business segment of DDP Specialty Electronic Materials US 9, LLC in accordance with a resolution of Board of Directors on September 10, 2019, to enhance enterprise portfolio through a new launch in materials industry. The acquisition of the business segment will be completed on February 29, 2020. Meanwhile, SK Siltron Co., Ltd. borrowed USD 450 million for the acquisition of the business segment on February 21, 2020 and paid additional capital of USD 500 million to SK Siltron USA, Inc. in accordance with a resolution of Board of Directors on February 17, 2020.