

SK E&S Co., Ltd. and Subsidiaries

**Consolidated Financial Statements
December 31, 2017 and 2016**

SK E&S Co., Ltd. and Subsidiaries
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December 31, 2017 and 2016

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Independent Auditor's Report

(English Translation of a Report Originally Issued in Korean)

To the Board of Directors and Shareholders of
SK E&S Co., Ltd.

We have audited the accompanying consolidated financial statements of SK E&S Co., Ltd. and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as at December 31, 2017 and 2016, and the consolidated statements of profit or loss, 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 statements including a summary of significant accounting policies and other explanatory information.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS) and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We conducted our audits in accordance with Korean Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of SK E&S Co., Ltd. and its subsidiaries as at December 31, 2017 and 2016, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean IFRS.

Other Matter

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

Samuel PricewaterhouseCoopers

Seoul, Korea
March 8, 2018

This report is effective as of March 8, 2018, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

SK E&S Co., Ltd. and Subsidiaries
Consolidated Statements of Financial Position
December 31, 2017 and 2016

(in thousands of Korean won)

	Notes	2017	2016
Assets			
Non-current assets			
Property, plant and equipment	7,32	₩ 4,934,621,925	₩ 4,728,039,898
Investment properties	8	96,371,334	96,451,635
Intangible assets	9,32	768,417,071	701,486,419
Investments in joint ventures and associates	10,32	874,635,300	786,654,463
Deferred tax assets	28	29,028,623	11,980,793
Available-for-sale financial assets	5,6,11	110,771,878	89,351,789
Derivative assets	5,6	-	2,974,680
Net defined benefit assets	19	879,261	-
Other financial assets	5,12,32	21,933,037	25,470,023
Other assets	13	11,355,790	11,717,919
		<u>6,848,014,219</u>	<u>6,454,127,619</u>
Current assets			
Inventories	14	110,459,028	52,950,085
Trade receivables	5,15,34	834,178,541	620,985,415
Derivative assets	5,6	393,164	1,121,287
Other financial assets	5,12,32	159,634,686	18,894,033
Other assets	13	252,463,826	108,022,471
Cash and cash equivalents	4,5,16	1,137,775,579	558,483,039
		<u>2,494,904,824</u>	<u>1,360,456,330</u>
Total assets		<u>₩ 9,342,919,043</u>	<u>₩ 7,814,583,949</u>
Liabilities			
Non-current liabilities			
Borrowings	4,5,6,17	₩ 2,842,488,919	₩ 2,782,556,437
Derivative liabilities	5,6	17,532,536	7,598,957
Other financial liabilities	4,5,18	5,380,628	5,353,454
Deferred tax liabilities	28	129,114,996	105,416,011
Net defined benefit liabilities	19	-	6,543,855
Unearned revenue		397,687,934	346,404,251
Other liabilities	20	3,361,465	2,931,790
		<u>3,395,566,478</u>	<u>3,256,804,755</u>
Current liabilities			
Trade payables	4,5,32,34	943,780,832	788,375,777
Derivative liabilities	5,6	5,653,779	4,249,142
Other financial liabilities	4,5,18,32,34	440,112,962	161,959,649
Other liabilities	20	63,974,004	20,084,682
Current tax liabilities	28	69,975,466	24,667,452
Borrowings	4,5,6,17	663,735,907	549,507,796
		<u>2,187,232,950</u>	<u>1,548,844,498</u>
Total liabilities		<u>5,582,799,428</u>	<u>4,805,649,253</u>
Equity			
Share capital	1,21	244,259,955	221,058,960
Share premium	21	1,074,562,299	420,107,124
Retained earnings	22	1,048,316,558	878,188,234
Other components of equity	23	984,497,102	1,052,991,840
Equity attributable to owners of the Controlling Company		<u>3,351,635,914</u>	<u>2,572,346,158</u>
Non-controlling interest	33	<u>408,483,701</u>	<u>436,588,538</u>
Total equity		<u>3,760,119,615</u>	<u>3,008,934,696</u>
Total liabilities and equity		<u>₩ 9,342,919,043</u>	<u>₩ 7,814,583,949</u>

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

SK E&S Co., Ltd. and Subsidiaries
Consolidated Statements of Profit or Loss
Years Ended December 31, 2017 and 2016

<i>(in thousands of Korean won, except per share amounts)</i>	Notes	2017	2016
Continuing operations			
Revenue	32,34,35	₩ 5,535,226,115	₩ 4,044,762,971
Cost of sales	14,26,32,34	<u>4,693,951,136</u>	<u>3,425,927,897</u>
Gross profit		841,274,979	618,835,074
Selling and administrative expenses	24,26,34	<u>485,556,881</u>	<u>464,308,198</u>
Operating profit		355,718,098	154,526,876
Other income	25	99,521,308	73,359,929
Other expenses	25	57,967,507	36,201,665
Share of profit of associates	10	155,942,364	95,890,118
Finance income	5,27	50,098,365	12,952,721
Finance costs	5,27	<u>139,082,842</u>	<u>46,792,069</u>
Profit before income tax		464,229,786	253,735,910
Income tax expense	28	<u>89,904,629</u>	<u>55,361,613</u>
Profit for the year		<u>₩ 374,325,157</u>	<u>₩ 198,374,297</u>
Profit attributable to:			
Owners of the Controlling Company		₩ 350,437,948	₩ 172,144,377
Non-controlling interests		23,887,209	26,229,920
Earnings per share attributable to the equity holders of the Parent Company			
Basic and diluted earnings per share	29	₩ 8,278	₩ 4,122

The above consolidated statements of profit or loss should be read in conjunction with the accompanying notes.

SK E&S Co., Ltd. and Subsidiaries
Consolidated Statements of Comprehensive Income
Years Ended December 31, 2017 and 2016

<i>(in thousands of Korean won)</i>	Notes	2017	2016
Profit for the year		₩ 374,325,157	₩ 198,374,297
Other comprehensive income			
Items that will not be reclassified subsequently to profit or loss:			
Remeasurements of net defined benefit liabilities	19	2,524,946	(1,748,472)
Items that will be reclassified subsequently to profit or loss:			
Change in value of available-for-sale financial assets	11	1,431,527	(7,391)
Share of other comprehensive income of associates	10	(23,278,299)	(52,123,172)
Exchange differences on translation of foreign operations		(94,489,492)	25,712,552
Cash flow hedges		9,512,657	(2,388,953)
Total comprehensive income for the year		<u>₩ 270,026,496</u>	<u>₩ 167,818,861</u>
Attributable to:			
Owners of the Controlling Company		₩ 247,483,079	₩ 141,772,215
Non-controlling interest		<u>22,543,416</u>	<u>26,046,646</u>
Total comprehensive income for the year		<u>₩ 270,026,495</u>	<u>₩ 167,818,861</u>

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

SK E&S Co., Ltd. and Subsidiaries
Consolidated Statements of Changes in Equity
Years Ended December 31, 2017 and 2016

(in thousands of Korean won)

	Attributable to owners of the Controlling Company							Non-controlling Interest	Total Equity
	Share Capital	Share Premium	Retained Earnings	Other Components of Equity	Total				
Balance at January 1, 2016	₩ 221,058,960	₩ 420,107,124	₩ 956,677,398	₩ 1,081,415,120	₩ 2,679,258,602	₩ 345,110,355	₩ 3,024,368,957		
Comprehensive income									
Profit for the year	-	-	172,144,377	-	172,144,377	26,229,920	198,374,297		
Remeasurements of the net defined benefit liability	-	-	(1,956,785)	-	(1,956,785)	208,313	(1,748,472)		
Change in value of available-for-sale financial assets	-	-	-	(7,391)	(7,391)	-	(7,391)		
Share of other comprehensive income of associates	-	-	-	(51,086,219)	(51,086,219)	(1,036,953)	(52,123,172)		
Exchange differences on translation of foreign operations	-	-	-	25,067,186	25,067,186	645,366	25,712,552		
Cash flow hedges	-	-	-	(2,388,953)	(2,388,953)	-	(2,388,953)		
Total comprehensive income for the year	-	-	170,187,592	(28,415,377)	141,772,215	26,046,646	167,818,861		
Transactions with owners of the Controlling Company									
Cash dividends	-	-	(216,117,268)	-	(216,117,268)	(1,634,071)	(217,751,339)		
Issuance of the hybrid bond	-	-	-	-	-	77,413,698	77,413,698		
Interest paid on hybrid bond	-	-	(32,817,663)	-	(32,817,663)	(10,348,090)	(43,165,753)		
Others	-	-	258,175	(7,903)	250,272	-	250,272		
Total transactions with owners of the Controlling Company	-	-	(248,676,756)	(7,903)	(248,684,659)	65,431,537	(183,253,122)		
Balance at December 31, 2016	₩ 221,058,960	₩ 420,107,124	₩ 878,188,234	₩ 1,052,991,840	₩ 2,572,346,158	₩ 436,588,538	₩ 3,008,934,696		
Balance at January 1, 2017	₩ 221,058,960	₩ 420,107,124	₩ 878,188,234	₩ 1,052,991,840	₩ 2,572,346,158	₩ 436,588,538	₩ 3,008,934,696		
Comprehensive income									
Profit for the year	-	-	350,437,948	-	350,437,948	23,887,209	374,325,157		
Remeasurements of the net defined benefit liability	-	-	2,311,320	-	2,311,320	213,626	2,524,946		
Change in value of available-for-sale financial assets	-	-	-	1,502,121	1,502,121	(70,594)	1,431,527		
Share of other comprehensive income of associates	-	-	-	(22,750,769)	(22,750,769)	(527,530)	(23,278,299)		
Exchange differences on translation of foreign operations	-	-	-	(93,557,467)	(93,557,467)	(932,025)	(94,489,492)		
Cash flow hedges	-	-	-	9,539,926	9,539,926	(27,270)	9,512,656		
Total comprehensive income for the year	-	-	352,749,268	(105,266,189)	247,483,079	22,543,416	270,026,495		
Transactions with owners of the Controlling Company									
Issuance of shares	23,200,995	654,455,176	-	-	677,656,171	-	677,656,171		
Cash dividends	-	-	(150,843,589)	-	(150,843,589)	(1,297,799)	(152,141,388)		
Interest paid on hybrid bond	-	-	(31,777,094)	-	(31,777,094)	(12,097,912)	(43,875,006)		
Others	-	-	(261)	36,771,450	36,771,189	(37,252,542)	(481,353)		
Total transactions with owners of the Controlling Company	23,200,995	654,455,176	(182,620,944)	36,771,450	531,806,677	(50,648,253)	481,158,424		
Balance at December 31, 2017	₩ 244,259,955	₩ 1,074,562,300	₩ 1,048,316,558	₩ 984,497,101	₩ 3,351,635,914	₩ 408,483,701	₩ 3,760,119,615		

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

SK E&S Co., Ltd. and Subsidiaries
Consolidated Statements of Cash Flows
Years Ended December 31, 2017 and 2016

(in thousands of Korean won)

	Notes	2017	2016
Cash flows from operating activities			
Cash generated from operating activities			
Profit for the year		₩ 374,325,157	₩ 198,374,297
Adjustments to reconcile net income			
to net cash provided by operating activities	31	365,699,419	200,215,291
Changes in operating assets and liabilities	31	(93,300,792)	(93,843,555)
		646,723,784	304,746,033
Interest received		7,696,006	4,891,852
Interest paid		(109,809,253)	(84,713,850)
Dividends received		28,929,224	27,085,423
Income tax paid		(31,391,285)	(84,659,922)
Net cash inflow from operating activities		<u>542,148,476</u>	<u>167,349,536</u>
Cash flows from investing activities			
Disposal of property, plant and equipment	7	5,543,492	4,327,034
Disposal of intangible assets	9	777,950	1,081,600
Disposal of available-for-sale financial assets	11	176,415	8,837,037
Decrease in other financial assets		244,565	2,671,677
Disposal of investments in joint ventures and associates	10	-	49,525,554
Others		78,330,822	88,192,000
Purchases of property, plant and equipment	7	(458,566,256)	(663,209,835)
Purchases of intangible assets	9	(157,834,593)	(128,340,825)
Purchases of available-for-sale financial assets	11	(19,694,254)	(888,786)
Purchases of investments in joint ventures and associates	10	-	(17,606,940)
Increase in other financial assets		(112,050,913)	(1,000,294)
Others		-	(142,000)
Net cash outflow from investing activities		<u>(663,072,772)</u>	<u>(656,553,778)</u>
Cash flows from financing activities			
Proceeds from borrowings		1,577,909,609	1,960,729,874
Repayments of borrowings		(1,343,890,300)	(1,149,500,783)
Issuance of shares		677,656,171	-
Issuance of hybrid bonds		-	77,600,000
Cash dividends		(152,141,388)	(217,415,067)
Interest paid on hybrid bonds	23	(43,875,005)	(43,165,753)
Others		(254,072)	(768,556)
Net cash inflow from financing activities		<u>715,405,015</u>	<u>627,479,715</u>
Changes in cash and cash equivalents from currency translation		<u>(15,188,180)</u>	<u>316,668</u>
Net changes in cash and cash equivalents		<u>579,292,539</u>	<u>138,592,141</u>
Cash and cash equivalents at the beginning of year		<u>558,483,040</u>	<u>419,890,899</u>
Cash and cash equivalents at the end of the year		<u>₩ 1,137,775,579</u>	<u>₩ 558,483,040</u>

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

SK E&S Co., Ltd. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2017 and 2016

1. General Information

SK E&S Co., Ltd. (the "Company" or "Controlling Company") and its subsidiaries (collectively referred to as the "Group") were established on January 13, 1999, as a holding company of city gas companies and engages in city gas, power generation, mass energy, renewable energy and foreign resource development. As at December 31, 2017, the Company's share capital amounts to ₩244,259,955 thousand are owned by SK Holdings Co., Ltd., MD Prime 1st Co., Ltd. And MD Prime 2nd Co., Ltd., and their shareholding rates are 90%, 5.9% and 4.1%, respectively.

1.1 Subsidiaries

The consolidated subsidiaries as at December 31, 2017, are as follows:

	Industry	Location	Closing month	Percentage of ownership
Gangwon City Gas Co., Ltd.	City gas	Korea	December	100.0%
Yeongnam Energy Service Co., Ltd.	City gas	Korea	December	100.0%
Ko-one Energy Service Co., Ltd.	City gas	Korea	December	100.0%
Busan City Gas Co., Ltd. ⁶	City gas	Korea	December	67.3%
Jeonbuk Energy Service Co., Ltd.	City gas	Korea	December	100.0%
Jeonnam City Gas Co., Ltd.	City gas	Korea	December	100.0%
Chungcheong Energy Service Co., Ltd.	City gas	Korea	December	100.0%
Paju Energy Service Co., Ltd.	Power generation	Korea	December	100.0%
Wirye Energy Service Co., Ltd.	Mass energy	Korea	December	95.2%
Narae Energy Service Co., Ltd.	Mass energy	Korea	December	100.0%
SK E&S Hong Kong Co., Ltd. ¹	City gas	Hong Kong	December	87.0%
Prism Energy International Pte., Ltd. (Formerly, SK LNG Trading Pte., Ltd.) ²	Wholesale LNG	Singapore	December	100.0%
PT SK E&S Nusantara ³	Management consulting	Indonesia	December	100.0%
SK E&S Australia Pty Ltd.	Resource development	Australia	December	100.0%
SK E&S Americas, Inc.	Holding Company	USA	December	100.0%
SK E&S LNG, LLC ⁴	Sale LNG	USA	December	100.0%
DewBlaine Energy, LLC ⁴	Resource development	USA	December	100.0%
CAILIP Gas Marketing, LLC ⁴	Sale/Purchase LNG	USA	December	100.0%
Fajar Energy International Pte., Ltd. ⁵	Sale LNG	Singapore	December	100.0%

¹ Includes 50% ownership of Busan City Gas Co., Ltd.

² SK LNG Trading Pte., Ltd. changed its name to Prism Energy International Pte., Ltd.

³ Includes 31.44% ownership of Prism Energy International Pte., Ltd.

⁴ SK E&S Americas, Inc., a subsidiary, has 100% ownership.

⁵ Prism Energy International Pte., Ltd., a subsidiary, has 100% ownership.

⁶ Treasury stocks held by Busan City Gas Co., Ltd. are excluded from percentage of ownership.

SK E&S Co., Ltd. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2017 and 2016

1.2 Summarized Financial Information of Subsidiaries

Summarized financial information of the subsidiaries as at and for the years ended December 31, 2017 and 2016, is as follows:

(in thousands of Korean won)

(in thousands of Korean won)	2017											
	Assets		Liabilities		Equity		Revenue	Profit(loss) for the year	Total comprehensive income			
Gangwon City Gas Co., Ltd.	₩	95,977,935	₩	50,238,890	₩	45,739,045	₩	106,968,556	₩	4,695,135	₩	5,014,633
Yeongnam Energy Service Co., Ltd.		408,415,815		208,317,142		200,098,673		641,872,061		28,556,527		29,171,648
Ko-one Energy Service Co., Ltd.		797,081,431		419,788,257		377,293,174		1,063,058,324		16,313,711		17,574,341
Busan City Gas Co., Ltd.		907,165,309		326,247,343		580,917,966		935,235,002		45,014,306		41,498,033
Jeonbuk Energy Service Co., Ltd.		75,406,379		44,248,759		31,157,620		99,495,465		4,967,068		5,110,211
Jeonnam City Gas Co., Ltd.		113,604,682		71,371,175		42,233,507		158,881,100		7,601,986		7,730,400
Chungcheong Energy Service Co., Ltd.		309,464,727		185,604,005		123,860,722		451,767,531		22,053,807		22,115,588
Paju Energy Service Co., Ltd.		1,823,077,905		951,683,546		871,394,359		907,049,941		106,754,217		106,748,581
Wirye Energy Service Co., Ltd.		815,150,073		591,427,157		223,722,916		229,934,803		1,263,087		804,892
Narae Energy Service Co., Ltd.		753,342,656		575,558,447		177,784,209		283,128,077		(5,371,844)		2,901,520
SK E&S Hong Kong Co., Ltd.		76,719,863		-		76,719,863		-		(276,063)		(7,459,810)
Prism Energy International Pte., Ltd. (formerly, SK LNG Trading Pte., Ltd.)		165,220,845		122,202,589		43,018,256		874,543,552		20,261,549		16,560,730
PT SK E&S Nusantara		1,182,581		4,885		1,177,696		-		(1,035,839)		(1,242,090)
SK E&S Australia Pty Ltd.		410,842,377		152,136,509		258,705,868		-		(4,017,307)		(32,024,845)
SK E&S Americas, Inc.		703,909,523		172,316,705		531,592,818		-		(10,737,626)		6,537,481
SK E&S LNG, LLC		16,148,335		-		16,148,335		-		(28,377)		(2,096,722)
DewBlaine Energy, LLC		647,507,082		9,650,167		637,856,915		84,254,449		5,043,102		(65,334,805)
CAILIP Gas Marketing, LLC		3,756,446		903,083		2,853,363		-		1,706,577		3,562,939
Fajar Energy International Pte., Ltd.		1		-		1		-		-		-

SK E&S Co., Ltd. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2017 and 2016

(in thousands of Korean won)

		2016						
	Assets	Liabilities	Equity	Revenue	Profit(loss) for the year	Total comprehensive income		
Gangwon City Gas Co., Ltd.	₩ 86,510,490	₩ 42,838,077	₩ 43,672,413	₩ 97,366,355	₩ 3,969,178	₩ 3,465,704		
Yeongnam Energy Service Co., Ltd.	376,268,324	182,335,673	193,932,651	591,570,892	28,137,043	28,504,314		
Ko-one Energy Service Co., Ltd.	748,494,390	375,213,440	373,280,950	1,023,728,464	16,174,912	16,003,877		
Busan City Gas Co., Ltd.	840,641,030	296,220,596	544,420,434	886,881,771	49,691,196	49,319,155		
Jeonbuk Energy Service Co., Ltd.	67,770,654	40,717,133	27,053,521	94,425,466	4,394,271	4,145,715		
Jeonnam City Gas Co., Ltd.	103,839,547	64,407,359	39,432,188	141,998,668	6,727,491	6,455,211		
Chungcheong Energy Service Co., Ltd.	273,438,982	158,212,487	115,226,495	415,968,569	18,285,808	17,949,226		
Paju Energy Service Co., Ltd.	1,440,081,654	662,707,569	777,374,085	-	(6,110,920)	(6,156,592)		
Wirye Energy Service Co., Ltd.	701,182,145	478,264,121	222,918,024	8,619,953	(7,372,633)	(7,347,990)		
Narae Energy Service Co., Ltd.	759,352,791	584,470,102	174,882,689	294,558,546	(10,992,571)	(12,591,261)		
SK E&S Hong Kong Co., Ltd.	84,179,673	-	84,179,673	-	47,615,662	54,431,734		
Prism Energy International Pte., Ltd. (Formerly, SK LNG Trading Pte., Ltd.)	54,272,853	29,484,712	24,788,141	122,082,975	388,212	1,399,216		
PT SK E&S Nusantara	751,504	1,103	750,401	-	(1,105,312)	(1,055,152)		
SK E&S Australia Pty Ltd.	370,707,886	168,986,146	201,721,740	-	(3,668,772)	2,594,611		
SK E&S Americas, Inc.	577,160,705	158,005,688	419,155,017	-	(5,663,356)	(12,512,116)		
SK E&S LNG, LLC	18,245,842	784	18,245,058	-	(1,549)	549,486		
DewBlaine Energy, LLC	579,830,850	4,449,568	575,381,282	34,309,883	(3,367,881)	16,860,930		
CAILIP Gas Marketing, LLC	1,567,475	2,277,051	(709,576)	-	(57,635)	(1,408,608)		
Fajar Energy International Pte., Ltd.	1	-	1	-	-	-		

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2. Significant Accounting Policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

2.1 Basis of Preparation

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

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

2.2 Changes in Accounting Policy and Disclosures

(a) New and amended standards adopted by the Group

The Group has applied the following standards and amendments for the first time for their annual reporting period commencing January 1, 2017. The adoption of these amendments did not have any material impact on the financial statements.

- Amendments to Korean IFRS 1007 *Statement of Cash Flows*
- Amendments to Korean IFRS 1012 *Income Tax*
- Amendments to Korean IFRS 1112 *Disclosures of Interests in Other Entities*

(b) New standards and interpretations not yet adopted by the Group

Certain new accounting standards and interpretations that have been published that are not mandatory for annual reporting period commencing January 1, 2017 and have not been early adopted by the Group are set out below.

- Amendments to Korean IFRS 1102 *Share-based Payment*

Amendments to Korean IFRS 1102 clarify accounting for a modification to the terms and conditions of a share-based payment that changes the classification of the transaction from cash-settled to equity-settled. Amendments also clarify that the measurement approach should treat the terms and conditions of a cash-settled award in the same way as for an equity-settled award. The amendments will be effective for annual periods beginning on or after January 1, 2018, with early adoption permitted. The Group does not expect the amendments to have a significant impact on the financial statements.

- Enactment of Korean IFRS 1116 *Leases*

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

At inception of a contract, the entity shall assess whether the contract is, or contains, a lease. Also, at the date of initial application, the entity shall assess whether the contract is, or contains, a lease in accordance with the standard. However, the entity will not need to reassess all contracts with applying the practical expedient because the entity elected to apply the practical expedient only to contracts entered before the date of initial application.

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

Lessee accounting

A lessee shall apply this standard to its leases either:

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

The Group has not yet elected the application method.

The Group performed an impact assessment to identify potential financial effects of applying Korean IFRS 1116. The assessment was performed based on available information as at December 31, 2017 to identify effects on 2017 financial statements. The Group is analyzing the effects on the financial statements; however, it is difficult to provide reasonable estimates of financial effects until the analyses is complete.

Lessor accounting

The Group expects the effect on the financial statements applying the new standard will not be significant as accounting for the Group, as a lessor, will not significantly change.

- Enactment of Korean IFRS 1109 *Financial Instruments*

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The new standard for financial instruments issued on September 25, 2015 is effective for annual periods beginning on or after January 1, 2018 with early application permitted. This standard will replace Korean IFRS 1039 *Financial Instruments: Recognition and Measurement*. The Group will apply the standards for annual periods beginning on or after January 1, 2018.

The standard requires retrospective application with some exceptions. For example, an entity is not required to restate prior period in relation to classification and measurement (including impairment) of financial instruments. The standard requires prospective application of its hedge accounting requirements for all hedging relationships except the accounting for time value of options and other exceptions.

Korean IFRS 1109 *Financial Instruments* requires three main areas including: (a) classification and measurement of financial assets on the basis of the entity's business model for managing financial assets and the contractual cash flow characteristics of the financial assets, (b) a new impairment model of financial instruments based on the expected credit losses, and (c) hedge accounting including expansion of the range of eligible hedging instruments and hedged items that qualify for hedge accounting or change of a method of hedge effectiveness assessment.

An effective implementation of Korean IFRS 1109 requires preparation processes including financial impact assessment, accounting policy establishment, accounting system development and the system stabilization. The impact on the Group's financial statements due to the application of the standard is dependent on judgements made in applying the standard, financial instruments held by the Group and macroeconomic variables.

The Group performed an impact assessment to identify potential financial effects of applying Korean IFRS 1109. The assessment was performed based on available information as at December 31, 2017, and the results of the assessment are explained as below. The Group plans to perform more detailed analyses on the financial effects based on additional information in the future; therefore, the results of the assessment may change due to additional information that the Group may obtain after the assessment.

(a) Classification and Measurement of Financial Assets

When implementing Korean IFRS 1109, the classification of financial assets will be driven by the Group's business model for managing the financial assets and contractual terms of cash flow. The following table shows the classification of financial assets measured subsequently at amortized cost, at fair value through other comprehensive income and at fair value through profit or loss. If a hybrid contract contains a host that is a financial asset, the classification of the hybrid contract shall be determined for the entire contract without separating the embedded derivative.

<i>Business model for the contractual cash flows characteristics</i>	<i>Solely represent payments of principal and interest</i>	<i>All other</i>
<i>Hold the financial asset for the collection of the contractual cash flows</i>	Measured at amortized cost ¹	Recognized at fair value through profit or loss ²

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Hold the financial asset for the collection of the contractual cash flows and sale

Recognized at fair value through other comprehensive income ¹

Hold for sale

Recognized at fair value through profit or loss

¹ A designation at fair value through profit or loss is allowed only if such designation mitigates an accounting mismatch (irrevocable).

² Equity investments not held for trading can be recorded in other comprehensive income (irrevocable).

With the implementation of Korean IFRS 1109, the criteria to classify the financial assets at amortized cost or at fair value through other comprehensive income are more strictly applied than the criteria applied with Korean IFRS 1039. Accordingly, the financial assets at fair value through profit or loss may increase by implementing Korean IFRS 1109 and may result an extended fluctuation in profit or loss.

As at December 31, 2017, the Group owns loans and receivables of ₩ 2,153,521,843 thousand, financial assets available-for-sales of ₩ 110,771,878 thousand and financial assets at fair value through profit or loss of ₩ 174,866 thousand.

According to Korean IFRS 1109, a debt instrument is measured at amortized cost if: a) the objective of the business model is to hold the financial asset for the collection of the contractual cash flows, and b) the contractual cash flows under the instrument solely represent payments of principal and interest. As at December 31, 2017, the Group measured loans and receivables of ₩ 2,153,521,843 thousand at amortized costs.

According to Korean IFRS 1109, equity instruments that are not held for trading, the Group can make an irrevocable election at initial recognition to classify the instruments as assets measured at fair value through other comprehensive income, which all subsequent changes in fair value being recognized in other comprehensive income and not recycled to profit or loss. As at December 31, 2017, the Group holds equity instruments of ₩ 110,771,878 thousand classified as financial assets available-for-sale and recycled unrealized gain or loss of ₩ 272,059 thousand arose from the equity instruments to profit or loss.

According to Korean IFRS 1109, debt instruments those contractual cash flows do not represent solely payments of principal and interest and held for trading, and equity instruments that are not designated as instruments measured at fair value through other comprehensive income are measured at fair value through profit or loss. As at December 2017, the Group holds debt instruments classified as financial assets at fair value through profit or loss that amount to ₩ 174,866 thousand.

(b) Classification and Measurement of Financial Liabilities

Korean IFRS 1109 requires the amount of the change in the liability's fair value attributable to changes in the credit risk to be recognized in other comprehensive income, unless this treatment of the credit risk component creates or enlarges a measurement mismatch. Amounts presented in other comprehensive income are not subsequently transferred to profit or loss.

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Under Korean IFRS 1039, all financial liabilities designated at fair value through profit or loss recognized their fair value movements in profit or loss. However, under Korean IFRS 1109, certain fair value movements will be recognized in other comprehensive income and as a result profit or loss from fair value movements may decrease. As at December 31, 2017, total financial liabilities is ₩ 4,895,499,248 thousand of which ₩ 21,051,569 thousand are designated at fair value through profit or loss, and during 2017, the Group recognized loss(profit) for the year of ₩ 25,573,499 thousand for the financial liabilities measured at fair value through profit or loss due to their fair value increase (decrease).

(c) Impairment: Financial Assets and Contract Assets

The new impairment model requires the recognition of impairment provisions based on expected credit losses (ECL) rather than only incurred credit losses as is the case under Korean IFRS 1039. It applies to financial assets classified at amortized cost, debt instruments measured at fair value through other comprehensive income, lease receivables, contract assets, loan commitments and certain financial guarantee contracts.

Under Korean IFRS 1109 'expected loss' model, a credit event (or impairment 'trigger') no longer has to occur before credit losses are recognized. The Group will always recognize (at a minimum) 12-month expected credit losses in profit or loss. Lifetime expected losses will be recognized on assets for which there is a significant increase in credit risk after initial recognition.

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

¹ A loss allowance for lifetime expected credit losses is required for a financial instrument if the credit risk on that financial instrument has increased significantly since initial recognition. It is also required for contract assets or trade receivables that are not, according to Korean IFRS 1115 *Revenue from Contracts with Customers*, considered to contain a significant financing component. Additionally, the Group can elect an accounting policy of recognizing lifetime expected credit losses for all contract assets and/or all trade receivables, including those that contain a significant financing component.

² If the financial instrument has low credit risk at the end of the reporting period, the Group may assume that the credit risk has not increased significantly since initial recognition.

Under Korean IFRS 1109, the asset that is credit-impaired at initial recognition would recognize all changes in lifetime expected credit losses since the initial recognition as a loss allowance with any changes recognized in profit or loss.

As at December 31, 2017, the Group owns debt investment carried at amortized cost of

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₩ 2,153,521,843 thousand. And, the Group recognized loss allowance of ₩ 10,818,266 thousand for these assets.

(a) Hedge Accounting

Hedge accounting mechanics (fair value hedges, cash flow hedges and hedge of net investments in a foreign operations) required by Korean IFRS 1039 remains unchanged in Korean IFRS 1109, however, the new hedge accounting rules will align the accounting for hedging instruments more closely with the Group's risk management practices. As a general rule, more hedge relationships might be eligible for hedge accounting, as the standard introduces a more principles-based approach. Korean IFRS 1109 allows more hedging instruments and hedged items to qualify for hedge accounting, and relaxes the hedge accounting requirement by removing two hedge effectiveness tests that are a prospective test to ensure that the hedging relationship is expected to be highly effective and a quantitative retrospective test (within range of 80-125%) to ensure that the hedging relationship has been highly effective throughout the reporting period.

With implementation of Korean IFRS 1109, volatility in profit or loss may be reduced as some items that were not eligible as hedged items or hedging instruments under Korean IFRS 1039 are now eligible under Korean IFRS 1109.

As at December 31, 2017, the Group applies the hedge accounting to its assets, liabilities, firm commitments and forecast transactions that amount to ₩ 2,353,045 thousand (including forecast transactions not recognized in the statement of financial position). The Group reclassified the fair value changes of cash flow hedging instruments of ₩ 1,629,026 thousand, which were previously recognized in other comprehensive income, to profit or loss. As at December 31, 2017, the changes in fair values of cash flow hedging instruments recognized in accumulated other comprehensive income amount to ₩ 78,762 thousand.

Furthermore, when the Group first applies Korean IFRS 1109, it may choose as its accounting policy choice to continue to apply all of the hedge accounting requirements of Korean IFRS 1039 instead of the requirements of Korean IFRS 1109.

- Enactment of Korean IFRS 1115 Revenue from Contracts with Customers

Korean IFRS 1115 *Revenue from Contracts with Customers* issued on November 6, 2015 will be effective for annual reporting periods beginning on or after January 1, 2018 with early adoption permitted. This standard replaces Korean IFRS 1018 *Revenue*, Korean IFRS 1011 *Construction Contracts*, Interpretation 2031 *Revenue-Barter Transactions Involving Advertising Services*, Interpretation 2113 *Customer Loyalty Programs*, Interpretation 2115 *Agreements for the Construction of Real Estate* and Interpretation 2118 *Transfers of Assets from Customers*. The Group must apply Korean IFRS 1115 *Revenue from Contracts with Customers* within annual reporting periods beginning on or after January 1, 2018.

Korean IFRS 1018 and other current revenue standard identify revenue as income that arises in the course of ordinary activities of an entity and provides guidance on a variety of different types of

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revenue, such as, sale of goods, rendering of services, interest, dividends, royalties and construction contracts. However, the new standard is based on the principle that revenue is recognized when control of a good or service transfers to a customer so the notion of control replaces the existing notion of risks and rewards. A new five-step process must be applied before revenue from contract with customers can be recognized:

- Identify contracts with customers
- Identify the separate performance obligation
- Determine the transaction price of the contract
- Allocate the transaction price to each of the separate performance obligations, and
- Recognize the revenue as each performance obligation is satisfied.

The Group plans to perform detailed analysis on financial effects of applying the standard.

2.3 Consolidation

The Group has prepared the consolidated financial statements in accordance with Korean IFRS 1110 *Consolidated Financial Statements*.

(a) Subsidiaries

Subsidiaries are all entities over which the Company has control. The Company controls the corresponding investee when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Consolidation of a subsidiary begins from the date the Company obtains control of a subsidiary and ceases when the Company loses control of the subsidiary.

The Group applies the acquisition method to account for business combinations. The consideration transferred is measured at the fair values of the assets transferred, and identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are initially measured at their fair values at the acquisition date. The Group recognizes any non-controlling interest in the acquiree on an acquisition-by-acquisition basis in the event of liquidation, either at fair value or at the non-controlling interest's proportionate share of the recognized amounts of acquiree's identifiable net assets. All other non-controlling interests are measured at their acquisition-date fair values, unless another measurement basis is required by Korean IFRSs. Acquisition-related costs are expensed as incurred.

The excess of consideration transferred, amount of any non-controlling interest in the acquired entity and acquisition-date fair value of any previous equity interest in the acquired entity over the fair value of the net identifiable assets acquired is recorded as goodwill. If those amounts are less than the fair value of the net identifiable assets of the business acquired, the difference is recognized directly in the profit or loss as a bargain purchase.

Intercompany transactions, balances and unrealized gains on transactions between group companies are eliminated. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

When the Group ceases to consolidate for a subsidiary because of a loss of control, any retained

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interest in the subsidiary is remeasured to its fair value with the changed in carrying amount recognized in profit or loss.

(b) Associates

Associates are all entities over which the Group has significant influence, and investments in associates are initially recognized at acquisition cost using the equity method. Unrealized gains on transactions between the Group and its associates are eliminated to the extent of the Group's interest in the associates. If there is any objective evidence that the investment in the associate is impaired, the Group recognizes the difference between the recoverable amount of the associate and its book amount as impairment loss.

(c) Joint arrangement

A joint arrangement of which two or more parties have joint control is classified as either a joint operation or a joint venture. A joint operator has rights to the assets, and obligations for the liabilities, relating to the joint operation and recognizes the assets, liabilities, revenues and expenses relating to its interest in a joint operation. A joint venturer has rights to the net assets relating to the joint venture and accounts for that investment using the equity method.

2.4 Foreign Currency Translation

(a) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the each entity operates (the "functional currency"). The consolidated financial statements are presented in Korean won, which is the Controlling Company's functional and presentation currency.

(b) Transactions and balances

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

2.5 Property, Plant and Equipment

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

The Group measured certain land at fair value on the transition date January 1, 2010, and used the fair values as deemed cost.

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

	Estimated Useful Lives
Buildings	10 – 60 years
Structures	4 – 47 years
Pipelines	20 years
Machinery	3 – 20 years

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Vehicles	2 – 10 years
Other	3 – 10 years

The assets' depreciation method, residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

2.6 Borrowing Costs

General and specific borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are capitalized during the period of time that is required to complete and prepare the asset for its 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. Other borrowing costs are expensed in the period in which they are incurred.

2.7 Customers' Contribution to Construction Costs

According to the city gas supply agreement, applicants for city gas supply are charged part of the installation costs of gas supply if they use the gas supply facilities. Customers' contributions to construction costs received before January 1, 2010 (the transition date), are accounted for as contra-accounts to supply facilities and are offset against depreciation expense based on the remaining useful lives of the supply facilities, and those received after January 1, 2010 (the transition date), are accounted for as unearned revenue and recognized as revenue based on a systematic and reasonable method.

2.8 Government Grants

Grants from the government are recognized at their fair value where there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions. Government grants related to assets are presented in the statement of financial position either by deducting the grant in arriving at the carrying amount of the asset, and government grants related to costs are deferred and recognized in the profit or loss over the period necessary to match them with the costs that they are intended to compensate.

2.9 Investment Property

Investment property is property held to earn rentals or for capital appreciation or both. An investment property is measured initially at its cost. An investment property is measured after initial measurement at depreciated cost (less any accumulated impairment losses). After recognition as an asset, investment property is carried at cost less accumulated depreciation and impairment losses. The Group depreciates investment properties, except for land, using the straight-line method over their useful lives of 40 years.

The Group revalued certain land and buildings held as investment property at fair value on the transition date January 1, 2010, and used the fair values as deemed cost.

2.10 Intangible Assets

Goodwill is measured as explained in Note 2.3.(a) and carried at its cost less accumulated impairment losses.

Software development costs that are directly attributable to internally generated by the Group are recognized when the criteria; such as, technically feasible, generate probable future economic benefits and other, are met. Membership rights that have an indefinite useful life are not subject to amortization because there is no foreseeable limit to the period over which the assets are expected

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to be utilized

The Group amortizes intangible assets with a limited useful life using the straight-line method over the following periods:

	<u>Useful Lives</u>
Industrial property rights	5 – 10 years
Other	3 – 15 years

In relation to investment to the overseas gas development, the Group recognizes development costs that are directly attributable to acquisition, exploration, evaluation and development projects as intangible assets. They are accounted as follows:

(a) Expenditure for exploration, evaluation and development

Expenditures for acquisition of rights to explore, topographical, geological, geochemical and geophysical studies, exploratory drilling and activities in relation to evaluating the technical feasibility and commercial viability of extracting a mineral resource and expenditure in development stage such as construction of facilities for production are capitalized. Exploration and evaluation assets shall be assessed for impairment when facts and circumstances suggest that the carrying amount of an exploration and evaluation asset may exceed its recoverable amount.

(b) Production wells

Production wells are the wells that discovered the economic reserves and received permission to develop. Its cost includes purchase price, construction cost, expenditure on commencement of other production and the estimated amount of provision for restoration. The Group recognizes amortization on production wells using the unit of production method based on the verified reserves.

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2.11 Impairment of Non-financial Assets

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

2.12 Financial Assets

(a) Classification and Measurement

The Group classifies its financial assets into the following categories: financial assets at fair value through profit or loss, available-for-sale financial assets, loans and receivables, and held-to-maturity financial assets. Regular way purchases and sales of financial assets are recognized on trade-date, the date on which the Group commits to purchase or sell the asset.

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss. Available-for-sale financial assets and financial assets at fair value through profit or loss are subsequently carried at fair value. And, loans and receivables and held-to-maturity investments are subsequently carried at amortized cost using the effective interest method.

Gains or losses arising from changes in the fair value of financial assets at fair value through profit or loss are recognized in profit or loss within other income or other expenses. Gains or losses arising from changes in the available-for-sale financial assets are recognized in other comprehensive income, and amounts are reclassified to profit or loss when the associated assets are sold or impaired.

(b) Impairment

The Group assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired. A financial asset or a group of financial assets is impaired and impairment losses are incurred only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a 'loss event') and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or a group of financial assets that can be reliably estimated.

Impairment of loans and receivables is presented as a deduction in an allowance account. Impairment of other financial assets is directly deducted from their carrying amount. The Group writes off financial assets when the assets are determined to be no longer recoverable.

The Group considers that there is an objective evidence of impairment if significant financial difficulties of the debtor, or delinquency in interest or principal payments for more than a certain period is indicated. Moreover, in the case of equity investments classified as available-for-sale, a significant decline in the fair value of the security below its cost, or prolonged decline is considered an objective evidence of impairment.

(c) Derecognition

If the Group transfers a financial asset and the transfer does not result in derecognition because the Group has retained substantially of all risks and rewards of ownership of the transferred asset due to a recourse in the event the debtor defaults, the Group continues to recognize the transferred asset in

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its entirety and recognizes a financial liability for the consideration received.

(d) Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount reported in the consolidated 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.

2.13 Derivative Instruments

Derivatives are initially recognized at fair value on the date when a derivative contract is entered into and are subsequently re-measured at their fair value. Changes in the fair value of the derivatives that are not qualified for hedge accounting are recognized in profit or loss within 'other non-operating income (expenses)' or 'finance income (costs)' according to the nature of transactions.

The Group applies cash flow hedge accounting to hedge the price risk associated with forecast inventory purchase. The effective portion of changes in fair value of derivatives that are designated and qualify as cash flow hedges is recognized in other comprehensive income, and the ineffective portion is recognized in profit or loss within 'other non-operating income (expenses)'.

If the hedge no longer meets the criteria for hedge accounting, the adjustment to the carrying amount of a hedged item for which the effective interest method is used is amortized to profit or loss over the period to maturity.

2.14 Assets (or Disposal Group) Held for sale

Non-current assets (or disposal group) are classified as held for sale when their carrying amount will be recovered principally through a sale transaction rather than through continuing use and a sale is considered highly probable. The assets are measured at the lower amount between their carrying amount and the fair value less costs to sell.

2.15 Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the moving average method.

2.16 Financial Liabilities

(a) Classification and measurement

The Group's financial liabilities at fair value through profit or loss are financial instruments held for trading. A financial liability is held for trading if it is incurred principally for the purpose of repurchasing in the near term. A derivative that is not a designated as hedging instruments and an embedded derivative that is separated are also classified as held for trading.

The Group classifies non-derivative financial liabilities, except for financial liabilities at fair value through profit or loss and financial guarantee contracts, as financial liabilities carried at amortized cost and presented as 'trade payables', 'borrowings', and 'other financial liabilities' in the statement of financial position.

Preferred shares that provide for a mandatory redemption at a particular date are classified as liabilities. Interest expenses on these preferred shares calculated using the effective interest method are recognized in the statement of profit or loss as 'finance expenses', together with interest expenses recognized on other financial liabilities.

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(b) Derecognition

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, cancelled or expired or when the terms of an existing financial liability are substantially modified.

2.17 Financial Guarantee Contract

Financial guarantee contracts are recognized as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value, subsequently at the higher of the amount determined in accordance with Korean IFRS 1037 *Provisions, Contingent Liabilities and Contingent Assets* and the amount initially recognized less cumulative amortization in accordance with Korean IFRS1018 Revenue, and recognized in the statement of financial position within 'other financial liabilities'.

2.18 Provisions

Provisions are measured at the present value of management's best estimate of the expenditure required to settle the present obligation at the end of the reporting period, and the increase in the provision due to the passage of time is recognized as interest expense.

2.19 Employee Benefits

(a) Post-employment benefits

The Group has defined benefit plans. A defined benefit plan is a pension plan that is not a defined contribution plan. Generally, post-employment benefits are payable after the completion of employment, and the benefit amount depended on the employee's age, periods of service or salary levels. The liability recognized in the statement of financial position in respect of defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms approximating to the terms of the related obligation. Remeasurement gains and losses arising from experience adjustments and changes in actuarial assumptions are recognized in the period in which they occur, directly in other comprehensive income.

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

(b) Long-term employee benefits

Certain entities within the Group provide long-term employee benefits that are entitled to employees with service period for ten years and above. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. The Group recognizes service cost, net interest on other long-term employee benefits and remeasurements as profit or loss for the year. These liabilities are valued annually by an independent qualified actuary.

2.20 Revenue Recognition

Revenue is measured at the fair value of the consideration received or receivable for the sale of goods or rendering of services arising from the normal activities of the Group. It is stated as net of value added taxes, returns, rebates and discounts, after elimination of intra-company transactions.

The Group recognizes revenue when the amount of revenue can be reliably measured; when it is

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probable that future economic benefits will flow to the entity; and when specific criteria have been met for each of the Group's activities, as described below. The Group bases its estimate on historical results, taking into consideration the type of customer, the type of transaction and the specifics of each arrangement.

(a) Sales of goods

Sales of products and merchandise are recognized upon delivery when the significant risks and rewards of ownership of goods have transferred to the buyer.

(b) Sales of services

Revenues from services are generally recognized on the basis of the actual service provided.

(c) Interest income

Interest income is recognized using the effective interest method according to the time passed. When a loan and receivable is impaired, the Group reduces the carrying amount to its recoverable amount and continues unwinding the discount as interest income. Interest income on impaired loans and receivables is recognized using the original effective interest rate.

(d) Dividend income

Dividend income is recognized when the right to receive payment is established.

2.21 Lease

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

2.22 Current and Deferred Tax

The tax expense for the period consists of current and deferred tax. Current and deferred tax is recognized in profit or loss, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity, respectively.

The tax expense is measured using the tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Management periodically evaluates tax policies that are applied in tax returns in which applicable tax regulation is subject to interpretation. The Group recognizes current income tax on the basis of the amount expected to be paid to the tax authorities.

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

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

The Group recognizes a deferred tax liability all taxable temporary differences associated with investments in subsidiaries, associates, and interests in joint arrangements, except to the extent that the Group is able to control the timing of the reversal of the temporary difference and it is probable

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that the temporary difference will not reverse in the foreseeable future. In addition, The Group recognizes a deferred tax asset for all deductible temporary differences arising from such investments to the extent that it is probable the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

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

2.23 Segment Reporting

Information of each operating segment is reported in a manner consistent with the business segment reporting provided to the chief operating decision-maker (Note 35). The chief operating decision-maker is responsible for allocating resources and assessing performance of the operating segments.

2.24 Approval of Issuance of the Financial Statements

The consolidated financial statements were approved for issue by the Board of Directors on February 12, 2018, which is subject to change with the approval of the shareholders at their annual shareholders' meeting.

3. Critical Accounting Estimates and Assumptions

The preparation of financial statements requires the Group to make estimates and assumptions concerning the future. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

(a) Impairment of goodwill

The Group tests whether goodwill has suffered any impairment on an annual basis. The recoverable amount of a cash generating unit (CGU) is determined based on value-in-use calculations (Note 9).

(b) Income taxes

The Group's taxable income generated from these operations are subject to income taxes based on tax laws and interpretations of tax authorities in numerous jurisdictions. There are many transactions and calculations for which the ultimate tax determination is uncertain (Note 28).

(c) Fair value of financial instruments

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The Group uses its judgment to select a variety of methods and make assumptions that are mainly based on market conditions existing at the end of each reporting period (Note 6).

(d) Net defined benefit liability

The present value of net defined benefit liability depends on a number of factors that are determined on an actuarial basis using a number of assumptions including the discount rate (Note 19).

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4. Financial Risk Management

The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk, interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk. In order to manage these risk factors, the Group operates corresponding risk management policies and programs to monitor and respond to each risk factor carefully.

Financial assets subject to financial risk management include cash and cash equivalents, short-term investments, available-for-sale financial assets, trade receivables, other financial assets and others and financial liabilities include trade payables, borrowings, other financial liabilities and others.

4.1 Market risk

(a) Foreign exchange risk

The Group procures LNG for generators from overseas and is exposed to foreign exchange risk from various currency exposures, primarily with respect to the US dollar. The purpose of the Group's foreign exchange risk management is to maximize the value of the company by minimizing uncertainty due to fluctuations in the exchange rate and profit and loss.

As at December 31, 2017, based on the assumption that Korean won has strengthened/weakened by 15% against the US dollar with all other variables held constant, post-tax profit for the year would increase/decrease by ₩ 34,635,719 thousand (2016: ₩ 16,416,116 thousand) due to the effect of gain or loss on currency translation of assets and liabilities in the foreign currency.

Details of the Controlling Company's assets and liabilities denominated in foreign currencies as at December 31, 2017 and 2016, are as follows:

<i>(in thousands of foreign currency, in thousands of Korean won)</i>	2017				2016			
	Foreign Currency		Korean won		Foreign Currency		Korean won	
Assets								
Cash and cash equivalents	CNY	115,056	₩	18,828,937	CNY	114,107	₩	19,770,249
	USD	1,102		1,180,589	USD	389		470,196
	COP	348,115		125,321	COP	355,428		142,171
	SGD	146		115,173	SGD	27		22,759
	HKD	33		4,575	HKD	10		1,616
	PHP	168		3,590	IDR	350,691		31,562
Liabilities								
Long-term borrowings	USD	241,561	₩	258,808,784	USD	93,961	₩	113,552,240
Short-term borrowings	USD	57,284		61,374,393	USD	24,927		30,123,919
Trade payables	-	-		-	SGD	16		13,369
Accrued expenses	EUR	5,162		6,603,364	-	-		-
	USD	7,889		8,452,802	-	-		-
Other payables	CNY	75		12,354	CNY	133		23,094
	USD	3,491		3,739,936	USD	1,166		1,409,108
	HKD	433		59,370	-	-		-
	CHF	27		29,557	-	-		-
	-	-		-	JPY	2,000		20,736

Gain and loss on foreign currency translation are ₩ 23,510,230 thousand (2016: ₩ 2,383,077 thousand) and ₩ 59,189 thousand (2016: ₩ 7,028,080 thousand), respectively, for the year ended

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December 31, 2017 (Note 27).

(b) Price risk

The Group is exposed to equity securities price risk arises from available-for-sale financial assets held by the Group for managing liquidity and operations. To manage its price risk arising from investments in equity securities, the Group diversifies its portfolio.

As at December 31, 2017, if the price of the available-for-sale financial assets carried at fair value had increased or decreased by 10%, the Group's equity would have increased or decreased by ₩1,778,456 thousand (2016: ₩1,608,097 thousand).

(c) Interest rate risk

The Group's interest rate risk arises from borrowings. Borrowings issued at variable rates expose the Group to cash flow interest rate risk which is partially offset by cash held at variable rates. Fixed rate borrowings expose the Group to fair value interest rate risk.

As at December 31, 2017, if interest rates on Korean won-denominated borrowings had been 10 basis points higher or lower with all other variables held constant, post-tax profit for the year would have been decreased or increased by ₩ 603,357 thousand (2016: ₩ 564,954 thousand).

4.2 Credit Risk

Credit risk is managed on a group basis. Credit risk arises from cash and cash equivalents, and deposits with banks and financial institutions, as well as credit exposures to customers, including outstanding receivables and committed transactions. The credit quality of the customer is evaluated taking into account its financial position, past experience and other factors. Individual risk limits are set based on internal or external ratings in accordance with limits set by the board. The utilization of credit limits is regularly monitored.

No credit limits were exceeded during the reporting period, and management does not expect any losses from nonperformance by significant counterparties.

No significant impairment indicators or past due from trade receivables, loans and other receivables have been found during the reporting period, and the risk of nonperformance is low based on the management assessment as of reporting date. Credit risk is also related to the transactions with financial institutions. To reduce such risk, Group has limited business relationship with the financial institutions with higher credit rating.

The maximum exposure to credit risk at the reporting date is the carrying amount of the financial assets.

4.3 Liquidity Risk

The Group monitors rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs.

The Group has sufficient assets including cash and cash equivalents and maintains sufficient headroom on its undrawn committed borrowing facilities elastically. Financial liabilities derived from operating activities are mostly due within 3 months. The Group maintains liquidity by holding sufficient cash and cash equivalent exceeds estimated monthly payments.

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The table below analyzes the Group's non-derivative financial liabilities into relevant maturity groupings based on the remaining period at the statement of financial position date to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows, and include interest payable.

Details of the Group's maturity analysis as at December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

		2017					
	<u>Book amount</u>	<u>Contractual undiscounted cash flows</u>	<u>Less than 3 months</u>	<u>Between 3 months and 1 year</u>	<u>Between 1 and 5 years</u>	<u>More than 5 years</u>	
Trade payables	₩ 943,780,832	₩ 943,780,832	₩ 943,780,832	₩ -	₩ -	₩ -	
Other financial liabilities	445,493,590	445,497,086	436,026,917	4,749,591	2,154,367	2,566,210	
Borrowings	3,506,224,826	3,962,764,172	473,522,936	274,068,737	1,847,842,883	1,367,329,618	
Fund supplement ¹	-	360,000,000	-	-	300,000,000	60,000,000	
Derivative liabilities	23,186,316	23,879,792	4,458,143	1,199,243	18,251,435	(29,029)	

(in thousands of Korean won)

		2016					
	<u>Book amount</u>	<u>Contractual undiscounted cash flows</u>	<u>Less than 3 months</u>	<u>Between 3 months and 1 year</u>	<u>Between 1 and 5 years</u>	<u>More than 5 years</u>	
Trade payables	₩ 788,375,778	₩ 788,375,777	₩ 788,375,777	₩ -	₩ -	₩ -	
Other financial liabilities	167,313,103	167,313,103	157,645,243	5,126,372	2,128,503	2,412,985	
Borrowings	3,332,064,232	3,738,938,284	242,506,149	389,426,827	1,891,739,603	1,215,265,705	
Fund supplement ¹	-	360,000,000	-	-	300,000,000	60,000,000	
Derivative liabilities	11,848,099	12,215,957	660,481	3,613,065	6,913,449	1,028,962	

¹ Other than the amounts above, the Group has an obligation to replenish the funds of Boryeong LNG Terminal Co., Ltd., in case of shortage.

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4.4 Capital Risk Management

The purpose of capital management of the Group is to maintain a sound capital structure. The Group uses the debt ratio as a capital management index. This ratio is calculated by dividing total liabilities by total equity. Total liabilities and total equity are based on the amounts disclosed in the consolidated financial statements.

The debt-to-equity ratios as at December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>	2017	2016
Total liabilities	₩ 5,582,799,428	₩ 4,805,649,253
Total equity	3,760,119,616	3,008,934,696
Debt-to-equity ratio	148.47%	159.71%

5. Financial Assets and Liabilities by Category

Categorizations of financial assets and liabilities as at December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>		2017	2016
Financial assets at fair value through profit or loss	Derivative assets	₩ 174,866	₩ 4,095,966
Financial assets subject to hedge accounting	Derivative assets	₩ 218,298	₩ -
Loans and receivables	Cash and cash equivalents	₩ 1,137,775,579	₩ 558,483,039
	Trade receivables	834,178,541	620,985,415
	Other financial assets	181,567,723	44,364,057
		<u>₩ 2,153,521,843</u>	<u>₩ 1,223,832,511</u>
Available-for-sale financial assets	Available-for-sale financial assets	₩ 110,771,878	₩ 89,351,789
Financial liabilities at fair value through profit or loss	Derivative liabilities	₩ 21,051,569	₩ 418,993
Financial liabilities subject to hedge accounting	Derivative liabilities	₩ 2,134,747	₩ 11,429,106
Financial liabilities at amortized cost	Trade payables	₩ 943,780,832	₩ 788,375,777
	Other payables liabilities	445,493,590	167,313,103
	Borrowings	3,506,224,826	3,332,064,232
		<u>₩ 4,895,499,248</u>	<u>₩ 4,287,753,112</u>

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Net gains or losses on each category of financial instruments for the years ended December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>		2017		2016
Financial Assets				
Financial assets (liabilities) at fair value through profit or loss				
Gain (loss) on valuation	₩	(25,152,260)	₩	3,144,289
Loss on transactions		(1,899,199)		(1,193,895)
Loans and receivables				
Interest income		7,844,561		4,895,584
Gain (loss) on foreign currency transactions		23,160		(12,703)
Loss on foreign currency translation		(50,383)		(21,290)
Bad debts expense		(1,161,181)		76,032
Available-for-sale financial assets				
Gain (loss) on valuation (Other comprehensive income (loss))		1,431,527		(7,391)
Dividend income		817,508		5,126,923
Loss on disposal		-		(2,232,402)
Impairment		(86,858)		(51,548)
Financial liabilities				
Financial liabilities at amortized cost				
Interest expense	₩	(102,727,768)	₩	(35,967,798)
Gain (loss) on foreign currency transactions		7,768,200		(59,823)
Gain (loss) on foreign currency translation		23,501,424		(4,623,713)
Financial liabilities for hedge accounting				
Gain (loss) on valuation (Other comprehensive income (loss))		9,512,657		(2,388,953)
Gain on valuation (profit or loss)		78,762		-
Gain on transactions		1,629,026		-

6. Fair Value Estimation

The table below analyzes financial instruments carried at fair value, by valuation method. The different levels have been defined as follows:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1).
- Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (Level 2).
- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (Level 3).

The following table presents the Group's financial assets that are measured at fair value as at December 31, 2017 and 2016:

<i>(in thousands of Korean won)</i>		2017			
	Level 1	Level 2	Level 3	Total	
Available-for-sale financial assets	₩ -	₩ -	₩ 23,462,475	₩ 23,462,475	
Derivative assets	-	393,164	-	393,164	
Derivative liabilities	-	(23,186,316)	-	(23,186,316)	

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<i>(in thousands of Korean won)</i>		2016			
		Level 1	Level 2	Level 3	Total
Available-for-sale financial assets	₩	-	₩ -	₩ 21,215,000	₩ 21,215,000
Derivative assets		-	4,095,966	-	4,095,966
Derivative liabilities		-	(11,848,099)	-	(11,848,099)

There is no significant change in business and economic environments which influence the fair value of financial assets and liabilities of the Group for the year ended December 31, 2017. The classification of financial instruments is identical to the previous classification in 2016.

Details of derivative instruments as at December 31, 2017, are as follows:

<i>(in thousands of Korean won)</i>		Assets	Liabilities	Gain on valuation	Other comprehensive income
Currency forward ¹	₩	-	₩ (20,779,905)	₩ (24,875,871)	₩ -
Interest rate swap ²		-	(2,134,747)	-	7,436,301
Commodity swap ³		174,866	(261,860)	(276,389)	-
Others ⁴		218,298	(9,803)	78,762	2,076,356

¹ The currency forward is to hedge long term borrowing in foreign currency of USD 217,600 thousand and short-term borrowing in foreign currency of USD 57,858 thousand in order to avoid risk in fluctuation of currency exchange.

² The interest rate swap exchanges a fixed interest for a floating interest to hedge an interest rate risk of a borrowing of ₩470,000,000 thousand of Narae Energy Service Co., Ltd. and others which will be redeemed in installments over ten years.

³ The commodity swaps are to hedge cash flow risks derived from the LNG purchase agreements of Prism Energy International Pte., Ltd. (Formerly, SK LNG Trading Pte., Ltd.).

⁴ The derivatives to fix the sales price of Equity Gas in advance related to the investment in the North American gas field of CAIIP Gas Marketing, LLC.

The following table presents the valuation techniques for recurring fair value measurements categorized within Level 3 of the fair value hierarchy:

<i>(in thousands of Korean won)</i>	Fair value		Valuation techniques
Hana Land Chip Private Real Estate No.33	₩	11,448,400	Net Asset Value per Share
Plus Future Plan Private Securities Investment Trust No.5		11,014,075	Net Asset Value per Share
SK Mutual Funds		1,000,000	Net Asset Value per Share
	₩	23,462,475	

The following table presents the changes in Level 3 instruments for the years ended December 31, 2017 and 2016:

<i>(in thousands of Korean won)</i>	2017		2016	
Beginning balance	₩	21,215,000	₩	21,224,750
Gain (loss) recognized as other comprehensive income		1,975,416		(9,750)
Profit and loss substitution		272,059		-
Ending balance	₩	23,462,475	₩	21,215,000

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The following table presents available-for-sale financial assets that are valued at historical cost as at December 31, 2017 and 2016:

<i>(in thousands of Korean won)</i>		2017		2016	
Available- for- sale financial assets	SK Technology Innovation Company	₩	2,808,023	₩	2,808,023
	KNOC Ferghana Ltd.		80		80
	Contemporary Painting Art Trust No.1		495,041		495,041
	Sejung21 Co., Ltd.		-		358,917
	Construction Guarantee Cooperative		82,597		82,597
	Hana Power generation infrastructure Investment Private Equity Fund		59,000,000		59,000,000
	Plant & Mechanical contractors financial cooperative of Korea		40,862		40,862
	Jeonnam Dragons Football Club		50,000		50,000
	Powertel TRS Co., Ltd.		1		1
	Prostar Energy Infra Fund		24,792,580		5,253,139
	Government bond		40,219		40,219
	HOWON Co., Ltd.		-		7,910
		₩	87,309,403	₩	68,136,789

The range of reasonable fair value estimates of SK Technology Innovation Company shares and other investments is significant and the probabilities of the various estimates cannot be reasonably assessed and therefore, these instruments are measured at cost. The Group does not have any plans to dispose of the above-mentioned equities in the near future. These instruments will be measured at fair value when the Group develops a reliable estimate of the fair value.

Fair value and book amount of financial liabilities as at December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>		2017		2016	
		Book amount	Fair value	Book amount	Fair value
Financial liabilities					
Borrowings		₩ 3,506,224,826	₩ 3,517,548,161	₩ 3,332,064,232	₩ 3,412,007,924

Other financial liabilities whose book amount is a reasonable approximation of fair value are excluded from the fair value disclosures.

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7. Property, Plant and Equipment

Details of property, plant and equipment as at December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

	2017				
	Acquisition cost	Accumulated depreciation	Customers' contribution to construction costs	Government Grants	Book value
Land	₩ 660,613,636	₩ -	₩ -	₩ -	₩660,613,636
Buildings	372,116,481	(48,600,269)	-	-	323,516,212
Structures	437,504,031	(78,522,882)	-	-	358,981,149
Machinery	2,604,628,805	(448,223,658)	-	(7,063)	2,156,398,084
Vehicles	13,706,560	(6,584,497)	-	(36,667)	7,085,396
Tools and equipment	75,482,278	(58,763,906)	-	-	16,718,372
Pipelines	2,548,002,296	(1,412,920,965)	(86,791,636)	-	1,048,289,695
Others	391,519,866	(103,296,721)	-	-	288,223,145
Construction-in-progress	74,796,236	-	-	-	74,796,236
	<u>₩7,178,370,189</u>	<u>₩(2,156,912,898)</u>	<u>₩(86,791,636)</u>	<u>₩ (43,730)</u>	<u>₩ 4,934,621,925</u>

(in thousands of Korean won)

	2016				
	Acquisition cost	Accumulated depreciation	Customers' contribution to construction costs	Government Grants	Book value
Land	₩ 658,215,051	₩ -	₩ -	₩ -	₩ 658,215,051
Buildings	187,594,107	(36,898,509)	-	-	150,695,598
Structures	178,471,320	(59,175,956)	-	-	119,295,364
Machinery	988,814,586	(329,231,671)	-	(7,437)	659,575,478
Vehicles	13,346,855	(6,900,443)	-	-	6,446,412
Tools and equipment	69,105,355	(55,966,073)	-	-	13,139,282
Pipelines	2,420,995,841	(1,310,278,644)	(99,075,574)	-	1,011,641,623
Others	291,793,559	(54,169,353)	-	-	237,624,206
Construction-in-progress	1,871,406,884	-	-	-	1,871,406,884
	<u>₩6,679,743,558</u>	<u>₩ (1,852,620,649)</u>	<u>₩ (99,075,574)</u>	<u>₩ (7,437)</u>	<u>₩4,728,039,898</u>

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Changes in property, plant and equipment for the years ended December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)	2017							
	Beginning balance	Acquisitions	Disposals	Reclas-sification	Depreciation	Impairment	Net exchange differences	Ending Balance
Land	₩ 658,215,051	₩ 1,505,340	₩ (1,805,788)	₩ 2,699,033	₩ -	₩ -	₩ -	₩ 660,613,636
Buildings	150,695,598	5,242,505	(683,210)	180,105,221	(11,843,902)	-	-	323,516,212
Structures	119,295,364	3,276,089	(1,988,252)	257,804,215	(19,406,267)	-	-	358,981,149
Machinery	659,575,478	5,845,141	(2,130,834)	1,613,297,517	(120,189,218)	-	-	2,156,398,084
Vehicles	6,446,412	2,174,557	(240,843)	-	(1,288,093)	-	(6,637)	7,085,396
Tools and equipment	13,139,282	7,206,347	(102,907)	2,796,910	(6,290,236)	-	(31,024)	16,718,372
Pipelines	1,011,641,623	34,527,592	(1,457,303)	94,565,009	(90,987,226)	-	-	1,048,289,695
Others	237,624,206	197,328	(7,192)	148,973,656	(60,569,501)	(6,851,390)	(31,143,962)	288,223,145
Construction- in-progress	1,871,406,884	466,702,105	-	(2,253,378,068)	-	(6,127,770)	(3,806,915)	74,796,236
	<u>₩4,728,039,898</u>	<u>₩ 526,677,004</u>	<u>₩ (8,416,329)</u>	<u>₩ 46,863,493</u>	<u>₩ (310,574,443)</u>	<u>₩(12,979,160)</u>	<u>₩ (34,988,538)</u>	<u>₩ 4,934,621,925</u>

(in thousands of Korean won)	2016							
	Beginning balance	Acquisitions	Disposals	Reclas-sification	Depreciation	Impairment	Net exchange differences	Ending Balance
Land	₩ 657,700,319	₩ 427,081	₩ (62,787)	₩ 150,438	₩ -	₩ -	₩ -	₩ 658,215,051
Buildings	132,131,779	2,406,696	(1,602,931)	22,694,118	(4,934,064)	-	-	150,695,598
Structures	132,237,010	32,360	-	(4,205,491)	(8,768,515)	-	-	119,295,364
Machinery	711,780,346	1,924,644	(1,261,489)	(1,764,408)	(51,103,615)	-	-	659,575,478
Vehicles	6,952,594	1,573,100	(397,609)	-	(1,683,439)	-	1,766	6,446,412
Tools and equipment	13,683,983	5,490,639	(211,145)	376,802	(6,209,834)	-	8,837	13,139,282
Pipelines	984,116,351	28,162,571	(268,704)	89,631,465	(90,000,060)	-	-	1,011,641,623
Others	118,127,149	300,673	(6,196)	145,750,438	(34,796,235)	-	8,248,377	237,624,206
Construction- in-progress	1,522,944,969	598,627,957	-	(247,841,375)	-	(2,994,417)	669,750	1,871,406,884
	<u>₩4,279,674,500</u>	<u>₩638,945,721</u>	<u>₩(3,810,861)</u>	<u>₩ 4,791,987</u>	<u>₩ (197,495,762)</u>	<u>₩ (2,994,417)</u>	<u>₩ 8,928,730</u>	<u>₩ 4,728,039,898</u>

For the year ended December 31, 2017, the total depreciation expense of ₩ 310,574,443 thousand (2016: ₩ 197,495,762 thousand) was charged to 'cost of sales' of ₩ 212,956,189 thousand (2016: ₩ 99,454,061 thousand), 'selling and administrative expenses' of ₩ 97,618,254 thousand (2016: ₩98,041,701 thousand).

For the year ended December 31, 2017, the Group has capitalized borrowing costs amounting to ₩ 13,187,674 thousand (2016: ₩ 53,479,356 thousand) on qualifying assets. Borrowing costs were capitalized at the weighted average rate of its general borrowings of 3.47% (2016: 2.94%).

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8. Investment Properties

Changes in investment properties for the years ended December 31, 2017 and 2016, are as follows:

		2017		
		Land	Buildings	Total
Beginning net book amount	₩	94,782,128	₩ 1,669,507	₩ 96,451,635
Depreciation		-	(80,301)	(80,301)
Ending net book amount	₩	94,782,128	₩ 1,589,206	₩ 96,371,334
Acquisition cost		94,782,128	3,209,701	97,991,829
Accumulated depreciation		-	(1,620,495)	(1,620,495)

		2016		
		Land	Buildings	Total
Beginning net book amount	₩	94,782,128	₩ 1,749,872	₩ 96,532,000
Depreciation		-	(80,365)	(80,365)
Ending net book amount	₩	94,782,128	₩ 1,669,507	₩ 96,451,635
Acquisition cost		94,782,128	3,209,701	97,991,829
Accumulated depreciation		-	(1,540,194)	(1,540,194)

Fair value of investment properties as at December 31, 2017, is ₩ 130,296,467 thousand (2016: ₩ 126,540,094 thousand).

Rental income from investment properties for the year ended December 31, 2017, is ₩ 6,027,015 thousand (2016: ₩ 6,008,763 thousand).

Details of investment property provided as collateral as at December 31, 2017, are as follows:

		Assets provided as collateral			Related Borrowings		
		Item	Carrying amount	Secured amount	Secured parties	Related line item	Related amount
Busan City Gas Co., Ltd	Investment property	₩ 70,653,191	₩ 3,933,333		Megamart Co., Ltd. and others	Leasehold deposits	₩ 3,933,333

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9. Intangible Assets

Details of intangible assets as at December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

		2017			
		Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book amount
Development costs	₩	2,249,696	₩ (1,693,083)	₩ -	₩ 556,613
Goodwill		42,801,147	-	-	42,801,147
Exploration and evaluation assets		694,785,252	-	-	694,785,252
Industrial property rights		176,293	(134,368)	-	41,925
Memberships		20,605,205	-	(3,653,869)	16,951,336
Other		47,158,619	(33,877,821)	-	13,280,798
	₩	<u>807,776,212</u>	₩ <u>(35,705,272)</u>	₩ <u>(3,653,869)</u>	₩ <u>768,417,071</u>

(in thousands of Korean won)

		2016			
		Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book amount
Development costs	₩	1,925,019	₩ (1,544,028)	₩ -	₩ 380,991
Goodwill		42,801,147	-	-	42,801,147
Exploration and evaluation assets		628,581,459	-	-	628,581,459
Industrial property rights		199,308	(123,923)	-	75,385
Memberships		18,552,502	-	(3,287,317)	15,265,185
Other		42,288,953	(27,906,701)	-	14,382,252
	₩	<u>734,348,388</u>	₩ <u>(29,574,652)</u>	₩ <u>(3,287,317)</u>	₩ <u>701,486,419</u>

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SK E&S Co., Ltd. and Subsidiaries
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Changes in intangible assets for the years ended December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

(in thousands of Korean won)		2017								
	Beginning balance	Acquisition	Disposal	Transfer	Net exchange differences	Amortization	Impairment loss	Ending balance		
Development costs	₩ 380,991	₩ 644	₩ -	₩ 324,032	₩ -	₩ (149,054)	₩ -	₩ 556,613		
Goodwill	42,801,147	-	-	-	-	-	-	42,801,147		
Exploration and evaluation assets	628,581,459	154,130,623	-	(8,987,393)	(78,939,437)	-	-	694,785,252		
Industrial property rights	75,385	-	(23,015)	-	-	(10,445)	-	41,925		
Memberships	15,265,185	2,771,153	(718,450)	-	-	-	(366,552)	16,951,336		
Others	14,382,252	930,118	-	3,939,548	-	(5,971,120)	-	13,280,798		
	₩ 701,486,419	₩ 157,832,538	₩ (741,465)	₩ (4,723,813)	₩ (78,939,437)	₩ (6,130,619)	₩ (366,552)	₩ 768,417,071		

(in thousands of Korean won)

(in thousands of Korean won)	2016										
	Beginning balance	Acquisition	Disposal	Transfer	Net exchange differences	Amortization	Impairment loss	Ending balance			
Development costs	₩ 612,478	₩ 5,612	₩ (129,956)	₩ 38,847	₩ -	₩ (145,990)	₩ -	₩ 380,991			
Goodwill	42,801,147	-	-	-	-	-	-	42,801,147			
Exploration and evaluation assets	503,803,390	125,196,876	-	(20,537,697)	20,118,890	-	-	628,581,459			
Industrial property rights	89,315	-	(1,960)	12,116	-	(24,086)	-	75,385			
Memberships	14,951,171	1,911,358	(1,294,215)	-	-	-	(303,129)	15,265,185			
Others	9,844,207	1,263,280	(675)	10,676,036	-	(7,400,596)	-	14,382,252			
	₩ 572,101,708	₩ 128,377,126	₩ (1,426,806)	₩ (9,810,698)	₩ 20,118,890	₩ (7,570,672)	₩ (303,129)	₩ 701,486,419			

For the year ended December 31, 2017, total 2017 amortization expense of ₩ 6,130,619 thousand (2016: ₩ 7,570,672 thousand) was charged to 'cost of sales' of ₩ 297,406 thousand (2016: ₩ 364,930 thousand) and 'selling and administrative expenses' of ₩ 5,733,213 thousand (2016: ₩ 7,205,742 thousand).

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Assets, liabilities, income, expenses, operating cash flows and investing cash flows derived from exploration and evaluation activities as at and for the years ended December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>		2017		2016
Assets	₩	1,058,338,321	₩	950,538,735
Liabilities		161,775,538		173,435,714
Income		84,254,449		34,309,883
Expenses		(66,609,730)		(37,729,305)
Operating cash flows		64,962,399		5,013,373
Investing cash flows		(269,700,072)		(258,001,075)

The Group used the same goodwill allocation method for the years ended December 31, 2017 and 2016. The following is a summary of goodwill allocation for each operating segment (cash generating units):

<i>(in thousands of Korean won)</i>		2017		2016
Busan City Gas Co., Ltd.	₩	19,682,158	₩	19,682,158
Yeongnam Energy Service Co., Ltd.		933,032		933,032
Jeonnam City Gas Co., Ltd.		14,490,960		14,490,960
Gangwon City Gas Co., Ltd.		1,647,488		1,647,488
Jeonbuk Energy Service Co., Ltd.		6,044,247		6,044,247
Others		3,262		3,262
	₩	42,801,147	₩	42,801,147

Goodwill impairment reviews are undertaken annually. Impairment test suggests that the carrying value of cash generating units does not exceed the recoverable amount. The recoverable amounts of cash-generating units have been determined based on value-in-use calculations. These calculations use pre-tax cash flow projections based on financial budgets approved by management covering a five-year period. The key assumptions used for value-in-use calculations in 2017 and 2016 are as follows:

2017	Sales growth rate	Gross margin rate	Pre-tax discount rate
Busan City Gas Co., Ltd	6.0%	4.7%	6.9%
Yeongnam Energy Service Co., Ltd.	5.6%	5.0%	6.9%
Jeonnam City Gas Co., Ltd	5.4%	5.0%	6.9%
Gangwon City Gas Co., Ltd.	6.7%	4.9%	6.9%
Jeonbuk Energy Service Co., Ltd.	7.1%	5.5%	6.9%
2016	Sales growth rate	Gross margin rate	Pre-tax discount rate
Busan City Gas Co., Ltd	3.4%	4.7%	6.9%
Yeongnam Energy Service Co., Ltd.	6.6%	4.3%	6.9%
Jeonnam City Gas Co., Ltd	7.1%	4.3%	6.9%
Gangwon City Gas Co., Ltd.	8.3%	3.5%	6.9%
Jeonbuk Energy Service Co., Ltd.	7.7%	4.6%	6.9%

The Group determined the budgeted growth rate based on past performance and its expectations of market development. The discount rates used are industrial average weighted average cost of capital.

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10. Investments in Joint Ventures and Associates

Details in investments in joint ventures and associates as at December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

(in thousands of Korean won)

	Location	Percent age of owners hip	Closing month	2017			2016		
				Acquisition cost	Net asset value	Book amount	Acquisition cost	Net asset value	Book amount
Joint ventures									
Boryeong LNG Terminal Co.,Ltd	South Korea	50.0%	Dec.	₩110,000,000	₩ 84,947,287	₩ 113,683,703	₩ 110,000,000	₩ 76,269,957	₩ 105,006,373
China Gas-SK E&S LNG Trading Ltd.	Hong Kong	50.0%	Mar.	1,189,110	1,055,735	1,055,735	1,189,110	1,231,358	1,231,358
				111,189,110	86,003,022	114,739,438	111,189,110	77,501,315	106,237,731
Associates									
China Gas Holdings Ltd. ^{1,2}	Hong Kong	15.7%	Mar	471,451,662	514,753,782	737,849,693	471,451,662	416,568,433	649,234,675
Global Opportunities Fund	Cayman Islands	20.7%	Dec.	10,000,000	1,134,633	1,134,633	10,000,000	2,909,324	2,909,324
Shinan Green Energy	South Korea	22.2%	Dec.	8,559,000	7,234,614	8,002,714	8,559,000	7,481,193	8,249,294
Busan Green Energy	South Korea	28.5%	Dec	5,152,800	7,239,715	7,239,715	14,312,700	13,564,868	13,564,868
Gemini Partners Pte., Ltd.	Singapore	20.0%	Dec	7,889,084	2,433,534	5,669,107	7,889,084	3,223,000	6,458,571
				503,052,546	532,796,278	759,895,862	512,212,446	443,746,818	680,416,732
				₩614,241,656	₩ 618,799,300	₩ 874,635,300	₩ 623,401,556	₩ 521,248,133	₩ 786,654,463

¹ Although the Group holds less than 20% ownership, the Group exercises significant influence as the Group's director can exercise its voting right at the Board of Directors of these entities, and thus, the Group classifies these entities as associates.

² The fiscal year end of China Gas Holdings Ltd. is March 31 and its financial statements as at December 31 were not available. The semi-annual September 30 report was therefore used and the effects of significant transactions or events which occurred from October to December were reviewed.

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Changes in investments in joint ventures and associates for the years ended December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

	2017					
	Beginning balance	Acquisition	Disposal and dividends received ¹	Share of profit (loss)	Other changes in equity	Ending balance
Joint ventures						
Boryeong LNG Terminal Co.,Ltd	₩ 105,006,373	₩ -	₩ -	₩ 8,677,330	₩ -	₩ 113,683,703
China Gas-SK E&S LNG Trading Ltd.	1,231,358	-	-	(28,993)	(146,630)	1,055,735
Associates						
China Gas Holdings Ltd.	649,234,675	-	(14,345,327)	133,466,285	(30,505,940)	737,849,693
Global Opportunities Fund	2,909,324	-	-	(1,774,691)	-	1,134,633
Shinan Green Energy	8,249,294	-	-	(332,200)	85,620	8,002,714
Busan Green Energy	13,564,868	-	(9,159,900)	2,834,747	-	7,239,715
Gemini Partners Pte., Ltd.	6,458,571	-	-	(665,735)	(123,729)	5,669,107
	₩ 786,654,463	₩ -	₩ (23,505,227)	₩ 142,176,743	₩ (30,690,679)	₩ 874,635,300

¹The amount of disposal and dividends received of China Gas Holdings Ltd. is comprised of decrease in investments due to dividend of ₩ 28,110,949 thousand and increase in investment due to gain recognized for change in shareholding ratio in the amount of ₩ 13,765,622 thousand.

(in thousands of Korean won)

	2016					
	Beginning balance	Acquisition	Disposal and dividends received	Share of profit (loss) ¹	Other changes in equity	Ending balance
Joint ventures						
Boryeong LNG Terminal Co.,Ltd	₩ 97,397,052	₩ 10,000,000	₩ -	₩ (2,340,452)	₩ (50,227)	₩ 105,006,373
China Gas-SK E&S LNG Trading Ltd.	1,189,110	-	-	15,240	27,008	1,231,358
Associates						
Wuhan Zhongran – SK E&S Gas Group Co., Ltd.	3,658,320	-	(3,971,344)	350,292	(37,268)	-
China Gas-SK E&S HK Co., Ltd.	2,520,023	-	(4,677,778)	(741,618)	2,899,373	-
Aisikai Huineng Qinzhou Natural Gas Ltd	-	-	(4,135)	-	4,135	-
China Gas Holdings Ltd.	675,534,327	5,464,596	(21,958,500)	62,778,592	(72,584,340)	649,234,675
Global Opportunities Fund	3,893,304	-	-	(983,980)	-	2,909,324
Shinan Green Energy	6,051,158	2,142,344	-	89,357	(33,565)	8,249,294
Busan Green Energy	14,261,516	-	-	(696,648)	-	13,564,868
Gemini Partners Pte., Ltd.	7,889,082	-	-	(1,502,065)	71,554	6,458,571
	₩ 812,393,892	₩ 17,606,940	₩ (30,611,757)	₩ 56,968,718	₩ (69,703,330)	₩ 786,654,463

¹ The amount includes (reversal of) impairment loss on investments in joint ventures and associates.

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Details of valuation of investments in joint venture and associates under the equity method for the years ended December 31, 2017 and 2016, are as follows:

	2017			2016		
	Share of profit (loss)	Gain(loss) on disposal	Reversal of impairment loss	Share of profit (loss)	Gain(loss) on disposal	Reversal of impairment loss
<i>(in thousands of Korean won)</i>						
Joint venture						
Boryeong LNG Terminal Co.,Ltd	₩ 8,677,330	₩ -	₩ -	₩ (2,340,452)	₩ -	₩ -
China Gas-SK E&S LNG Trading Ltd.	(28,993)	-	-	15,240	-	-
Associates						
Wuhan Zhongran – SK E&S Gas Group Co., Ltd.	-	-	-	350,292	30,462,356	-
China Gas-SK E&S HK Co., Ltd.	-	-	-	(1,504,479)	7,036,564	762,861
Aisikai Huineng Qinzhou Natural Gas Ltd.	-	-	-	-	1,422,480	-
China Gas Holdings Ltd.	133,466,285	13,765,621	-	62,778,592	-	-
Global Opportunities Fund	(1,774,691)	-	-	(983,980)	-	-
Shinan Green Energy	(332,200)	-	-	89,357	-	-
Busan Green Energy	2,834,747	-	-	(696,648)	-	-
Gemini Partners Pte., Ltd.	(665,735)	-	-	(1,502,065)	-	-
	₩ 142,176,743	₩ 13,765,621	₩ -	₩ 56,205,857	₩ 38,921,400	₩ 762,861

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Summarized financial information of the Group's joint venture as at and for the years ended December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

	2017									
	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Revenue	Profit (loss)	Total comprehensive income (loss)	Dividends received		
Boryeong LNG Terminal Co.,Ltd	₩ 197,560,196	₩ 1,137,989,954	₩ 50,510,931	₩ 1,115,144,646	₩ 142,617,212	₩ 17,410,381	₩ 17,410,381	₩ -		
	Cash and cash equivalents	Current financial liabilities	Non-current financial liabilities	Depreciation	Other depreciation	Interest income	Interest expenses	Tax expenses (income)		
	₩ 63,505,390	₩ 49,318,540	₩ 1,114,719,851	₩ 45,857,407	₩ -	₩ 1,258,140	₩ 31,072,853	₩ (4,668,894)		

(in thousands of Korean won)

	2016									
	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Revenue	Profit (loss)	Total comprehensive income (loss)	Dividends received		
Boryeong LNG Terminal Co.,Ltd	₩ 214,338,786	₩ 1,080,799,624	₩ 29,316,642	₩ 1,113,281,854	₩ -	₩ (4,680,903)	₩ (4,680,903)	₩ -		
	Cash and cash equivalents	Current financial liabilities	Non-current financial liabilities	Depreciation	Other depreciation	Interest income	Interest expenses	Tax expenses (income)		
	₩ 17,509,535	₩ 29,070,943	₩ 1,112,350,087	₩ 161,021	₩ -	₩ 63,848	₩ -	₩ (1,850,868)		

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Summarized financial information of the Group's associates as at and for the years ended December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

	2017							
	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Revenue	Profit (loss)	Total comprehensive income (loss)	Dividends received
China Gas Holdings Ltd.	₩ 2,746,437,597	₩ 6,805,019,986	₩ 3,647,119,769	₩ 2,114,270,345	₩ 5,740,840,125	₩ 934,061,608	₩ 958,953,452	₩ 28,110,949
Global Opportunities Fund	250,307	5,438,823	207,418	-	1,457,860	788,123	788,123	-
Shinan Green Energy	5,428,966	163,813,990	3,462,906	133,225,555	5,391,124	(1,836,986)	(1,836,986)	-
Busan Green Energy	24,232,375	169,020,472	20,356,728	147,507,590	34,279,686	9,946,481	9,946,481	-
Gemini Partners Pte., Ltd.	6,767,315	5,918,764	518,406	-	-	(4,079,064)	(4,079,064)	-

(in thousands of Korean won)

	2016							
	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Revenue	Profit (loss)	Total comprehensive income (loss)	Dividends received
China Gas Holdings Ltd.	1,872,266,832	5,940,449,450	2,971,771,094	1,785,526,415	4,212,700,420	470,428,368	319,726,684	21,958,500
Global Opportunities Fund	689,372	13,366,340	-	-	11,651	(724,974)	(724,974)	-
Shinan Green Energy	5,733,615	112,021,757	27,646,511	56,444,802	-	(424,922)	(424,922)	-
Busan Green Energy	5,538,310	142,226,130	13,585,950	86,582,461	-	(2,444,377)	(2,444,377)	-
Gemini Partners Pte., Ltd.	11,712,573	4,496,443	94,014	-	-	(7,200,916)	(7,200,916)	-

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Details of adjustments from financial information of joint ventures and associates to the book amount of investments in joint ventures and associates for the years ended December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

(in thousands of Korean won)		2017				
		Net asset value (A)	Percentage of ownership (B)	Owned net asset value (AxB)	Goodwill	Book amount
Joint ventures						
Boryeong LNG Terminal Co.,Ltd.	₩	169,894,573	50.00%	₩ 84,947,287	₩ 28,736,416	₩ 113,683,703
China Gas-SK E&S LNG Trading Ltd.		2,111,470	50.00%	1,055,735	-	1,055,735
Associates						
China Gas Holdings Ltd.		3,275,113,845	15.72%	514,753,781	223,095,911	737,849,693
Global Opportunities Fund		5,481,712	20.70%	1,134,633	-	1,134,633
Shinan Green Energy		32,554,495	22.22%	7,234,614	768,100	8,002,714
Busan Green Energy		25,402,510	28.50%	7,239,715	-	7,239,715
Gemini Partners Pte., Ltd.		12,167,673	20.00%	2,433,535	3,235,571	5,669,106

(in thousands of Korean won)

(in thousands of Korean won)		2016				
		Net asset value (A)	Percentage of ownership (B)	Owned net asset value (AxB)	Goodwill	Book amount
Joint ventures						
Boryeong LNG Terminal Co.,Ltd.	₩	152,539,913	50.00%	₩ 76,269,957	₩ 28,736,416	₩ 105,006,373
China Gas-SK E&S LNG Trading Ltd.		2,462,752	50.00%	1,231,358	-	1,231,358
Associates						
China Gas Holdings Ltd.		2,600,795,051	16.02%	416,568,433	232,666,242	649,234,675
Global Opportunities Fund		14,055,711	20.70%	2,909,323	-	2,909,323
Shinan Green Energy		33,664,059	22.22%	7,481,193	768,101	8,249,294
Busan Green Energy		47,596,030	28.50%	13,564,868	-	13,564,868
Gemini Partners Pte., Ltd.		16,115,001	20.00%	3,223,000	3,235,572	6,458,572

Fair value of associate's marketable shares as at December 31, 2017 and 2016, is as follows:

(in thousands of Korean won)

(in thousands of Korean won)	2017			
	Number of shares owned	Market price per share (Korean Won)	Fair value	Book amount
China Gas Holdings Ltd.	780,908,500	₩ 2,961	₩ 2,312,270,069	₩ 737,849,693

(in thousands of Korean won)

(in thousands of Korean won)	2016			
	Number of shares owned	Market price per share (Korean Won)	Fair value	Book amount
China Gas Holdings Ltd.	780,908,500	₩ 1,639	₩ 1,280,143,771	₩ 649,234,675

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11. Available-for-Sale Financial Assets

Available-for-sale financial assets as at December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

	2017			2016		
	Acquisition cost	Fair value ¹	Book amount	Acquisition cost	Fair value ¹	Book amount
Fair value						
Hana Land Chip Private Real Estate No.33	₩ 10,000,000	₩ 11,448,400	₩ 11,448,400	₩ 10,000,000	₩ 10,199,400	₩ 10,199,400
Plus Future Plan Private Securities Investment Trust No.5	15,384,450	11,014,075	11,014,075	15,384,450	10,015,600	10,015,600
SK Mutual Funds	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Acquisition cost						
SK Technology Innovation Company	5,257,473	2,808,023	2,808,023	5,257,473	2,808,023	2,808,023
KNOC Ferghana Ltd.	80	80	80	80	80	80
Contemporary Painting Art Trust No.1	495,041	495,041	495,041	495,041	495,041	495,041
Sejung21 Co., Ltd.	669,000	-	-	669,000	358,917	358,917
Construction Guarantee Cooperative	82,597	82,597	82,597	82,597	82,597	82,597
Hana Power generation infrastructure Investment Private Equity Fund	59,000,000	59,000,000	59,000,000	59,000,000	59,000,000	59,000,000
Plant & Mechanical contractors financial cooperative of Korea	40,862	40,862	40,862	40,862	40,862	40,862
Jeonnam Dragons Football Club	50,000	50,000	50,000	50,000	50,000	50,000
Powertel TRS Co., Ltd.	289,140	1	1	289,140	1	1
Prostar Energy Infra Fund ²	24,792,580	24,792,580	24,792,580	5,253,139	5,253,139	5,253,139
Government bond	40,218	40,219	40,219	40,219	40,219	40,219
HOWON Co., Ltd.	-	-	-	7,910	7,910	7,910
	₩ 117,101,441	₩ 110,771,878	₩ 110,771,878	₩ 97,569,911	₩ 89,351,789	₩ 89,351,789

¹ The acquisition cost after deducting impairment was presented for available-for-sale financial assets measured at cost.

² Although the Group holds more than 20% ownership of Prostar Energy Infra Fund, the Group classified it as available-for-sale financial assets as the Group does not have significant influence. Hence, the equity method is not applied as the Group has no voting rights in the investment committee, which is the decision-making body of Prostar Energy Infra Fund.

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The changes in available-for-sale financial assets for the years ended December 31, 2017 and 2016, are as follows:

<i>(In thousands of Korean won)</i>		2017		2016	
Beginning balance	₩	89,351,789	₩	99,716,425	
Acquisitions		19,694,254		888,786	
Disposals		(162,723)		(11,196,700)	
Impairment loss		(86,858)		(51,548)	
Changes in fair value recognized in equity		1,975,416		(9,750)	
Others		-		4,576	
Ending balance	₩	110,771,878	₩	89,351,789	

12. Other Financial Assets

Other financial assets as at December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>		2017		2016	
		Non-current	Current	Non-current	Current
Loans	₩	47,157	₩ 26,760	₩ 45,107	₩ 9,470
Non-trade receivables		80,000	20,213,396	158,400	12,465,642
Accrued income		-	27,835,463	-	5,994,705
Guarantee deposits provided		21,578,447	310,768	25,073,868	302,965
Financial instruments		227,433	111,248,299	192,647	121,251
	₩	21,933,037	₩ 159,634,686	₩ 25,470,022	₩ 18,894,033

The maximum exposure to credit risk of above other financial assets as at December 31, 2017 is the carrying amount of other financial assets.

13. Other Assets

Other assets as at December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>		2017		2016	
		Non-current	Current	Non-current	Current
Advance payments	₩	-	₩ 181,166,743	₩ -	₩ 46,932,053
Prepaid expenses		126,095	48,927,505	2,768,792	39,863,142
Prepaid value added tax		-	22,369,578	-	21,227,276
Employee benefit fund		11,229,695	-	8,949,127	-
	₩	11,355,790	₩ 252,463,826	₩ 11,717,919	₩ 108,022,471

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14. Inventories

Inventories as at December 31, 2017 and 2016, are as follows:

<i>(In thousands of Korean won)</i>	2017	2016
Raw materials	₩ 90,587,820	₩ 41,111,545
Supplies	18,957,019	10,905,491
Merchandise	859,648	878,508
Others	54,541	54,541
	<u>₩ 110,459,028</u>	<u>₩ 52,950,085</u>

The cost of inventories recognized as expense and included in 'cost of sales' amounted to ₩ 4,217,499,155 thousand in 2017 (2016: ₩ 3,226,081,649 thousand).

15. Trade Receivables

Trade receivables as at December 31, 2017 and 2016, are as follows:

<i>(In thousands of Korean won)</i>	2017	2016
Trade receivables	₩ 841,257,987	₩ 629,558,343
Less: provision for impairment of trade receivables	(7,079,446)	(8,572,929)
Trade receivables, net	<u>₩ 834,178,541</u>	<u>₩ 620,985,414</u>

The aging analysis of trade receivables as at December 31, 2017 and 2016, are as follows:

<i>(In thousands of Korean won)</i>	2017	2016
Receivables not past due	₩ 734,890,662	₩ 576,772,990
Past due but not impaired ¹		
Up to 3 months	97,642,389	25,897,176
3 to 6 months	929,490	12,052,988
Over 6 months	2,370,067	6,262,260
	100,941,946	44,212,424
Impaired ²	5,425,379	8,572,929
	<u>₩ 841,257,987</u>	<u>₩ 629,558,343</u>

¹ Trade receivables past due but not impaired relate to a number of customers who have no recent history of default.

² The balance of provision was ₩ 5,425,379 thousand and ₩ 8,572,929 thousand as at December 31, 2017 and 2016, respectively.

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The credit quality of trade receivables that are neither past due nor impaired can be assessed by reference to historical information of counterparty's default rates as at December 31, 2017 and 2016:

<i>(In thousands of Korean won)</i>	2017	2016
Group 1 ¹	₩ 835,826,222	₩ 620,956,536
Group 2 ²	6,386	28,878
	<u>₩ 835,832,608</u>	<u>₩ 620,985,414</u>

¹ Customers with no default history in the past.

² Customers with default history in the past.

Changes in the provision for impairment of trade receivables for the years ended December 31, 2017 and 2016, are as follows:

<i>(In thousands of Korean won)</i>	2017	2016
Beginning balance	₩ 8,572,929	₩ 10,534,148
Provision for receivables impairment	1,179,623	357,202
Unused amounts reversed	(96,891)	(315,910)
Receivables written off during the year as uncollectible	<u>(2,576,215)</u>	<u>(2,002,511)</u>
Ending balance	<u>₩ 7,079,446</u>	<u>₩ 8,572,929</u>

The maximum exposure to credit risk of trade receivables as at December 31, 2017, is the carrying amount of receivables mentioned above.

16. Cash and Cash Equivalents

Cash and cash equivalents as at December 31, 2017 and 2016, are as follows:

<i>(In thousands of Korean won)</i>	2017	2016
Cash and cash equivalents		
Cash on hand	₩ 28,420	₩ 39,657
Short-term bank deposits	787,496,591	283,572,258
Time deposits	52,574,044	43,805,181
Short-term investments ¹	<u>297,676,524</u>	<u>231,065,943</u>
	<u>₩ 1,137,775,579</u>	<u>₩ 558,483,039</u>

¹ Short-term financial instruments with very high liquidity whose encashment is immediately possible, and the amounts with small risk of changes in fair values are classified as cash equivalents.

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Classification of the external credit rating of the financial institutions in which the Group deposits its cash and cash equivalents as at December 31, 2017 and 2016, are as follows:

<i>(In thousands of Korean won)</i>		2017		2016
Cash and cash equivalents				
AAA	₩	460,731,505	₩	372,712,456
AA		470,000,000		72,322,234
A		177,614,994		93,486,947
Others ¹		29,400,660		19,921,745
	₩	<u>1,137,747,159</u>	₩	<u>558,443,382</u>

¹ Consists of financial institutions with no external credit rating.

Financial assets that are restricted in use as at December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>			2017	
	Bank		Restricted amount	Details
Cash and cash equivalents	Korea Development Bank and others	₩	65,070,813	Pledged for PF commitment
<i>(in thousands of Korean won)</i>			2016	
	Bank		Restricted amount	Details
Cash and cash equivalents	Korea Development Bank and others	₩	87,257,956	Pledged for PF commitment

The above restricted cash and cash equivalents are classified as cash and cash equivalents because they are used for operating activities under the syndicate of creditors' agreement.

17. Borrowings

Details of borrowings as at December 31, 2017 and 2016, are as follows:

<i>(In thousands of Korean won)</i>		2017		2016
Non-current				
Bank borrowings	₩	1,222,558,254	₩	1,167,328,987
Debentures		<u>1,619,930,665</u>		<u>1,615,227,450</u>
		<u>2,842,488,919</u>		<u>2,782,556,437</u>
Current				
Bank borrowings		283,842,203		289,595,262
Debentures		<u>379,893,704</u>		<u>259,912,534</u>
		<u>663,735,907</u>		<u>549,507,796</u>
	₩	<u>3,506,224,826</u>	₩	<u>3,332,064,233</u>

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Details of bank borrowings as at December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>	Creditors	Interest rate		2017		2016
Loans for exploration of petroleum	Korea National Oil Corporation	0.75%	₩	25,672,144	₩	28,957,239
Loans for construction of pipelines	Kookmin Bank and others	1.75%		12,512,000		16,539,000
Loans for a safety management business	Shinhan Bank and others	1.75%		1,121,150		1,563,500
Loans for energy rationalization	Hana Bank	1.75%		3,660,000		3,811,200
CP borrowings	Shinhan Bank and others	2.40%		65,000,000		99,978,331
Loans for facility	Korea Development Bank and others	CD 90days+1.14% MOR+1.60 - 1.75%		456,368,629		398,942,267
PF borrowings	Korea Development Bank and others	3.21 - 3.90%		326,358,207		320,333,562
General borrowings	Korea Exim Bank and others	1.50 - 2.90%		294,511,033		261,269,581
Borrowing in foreign currency	Korea Exim Bank and others	Libor(3M)+0.95 - 1.74%		321,197,294		325,529,569
				1,506,400,457		1,456,924,249
	Less: Current portion of borrowings			(283,842,203)		(289,595,262)
			₩	1,222,558,254	₩	1,167,328,987

Under a PF arrangement, the Group provided it's subsidiaries' issued shares, cash and cash equivalents, insurance contractual rights and PP&E to PF syndicate as collaterals (Notes 32).

Details of debentures as at December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>	Bonds	Issuance date	Maturity date	Annual interest rate	2017	2016
SK E&S Co., Ltd.	Public offering bonds No.8-3	2010.10.08	2017.10.08	4.35%	₩	- ₩ 60,000,000
	Public offering bonds No.9-2	2012.04.13	2017.04.13	4.03%		200,000,000
	Public offering bonds No.10-1	2013.02.26	2018.02.26	3.02%	200,000,000	200,000,000
	Public offering bonds No.10-2	2013.02.26	2020.02.26	3.18%	100,000,000	100,000,000
	Public offering bonds No.11-2	2013.10.04	2018.10.04	3.46%	100,000,000	100,000,000
	Public offering bonds No.11-3	2013.10.04	2020.10.04	3.65%	50,000,000	50,000,000
	Public offering bonds No.12-1	2016.08.29	2019.08.29	1.48%	100,000,000	100,000,000
	Public offering bonds No.12-2	2016.08.29	2021.08.29	1.60%	140,000,000	140,000,000
	Public offering bonds No.12-3	2016.08.29	2023.08.29	1.70%	100,000,000	100,000,000
	Public offering bonds No.13-1	2017.04.12	2022.04.12	2.39%	150,000,000	-
	Public offering bonds No.13-2	2017.04.12	2024.04.12	2.62%	50,000,000	-
	Public offering bonds No.13-3	2017.04.12	2027.04.12	2.88%	50,000,000	-
Paju Energy Service Co., Ltd.(formerly, PMP Co., Ltd.)	Public offering bonds No.1-1	2015.03.18	2022.03.18	2.53%	100,000,000	100,000,000
	Public offering bonds No.1-2	2015.03.18	2025.03.18	2.92%	190,000,000	190,000,000
	Public offering bonds No.1-3	2015.03.18	2027.03.18	3.01%	60,000,000	60,000,000
	Public offering bonds No.2-1	2015.09.04	2022.09.04	2.54%	50,000,000	50,000,000
	Public offering bonds No.2-2	2015.09.04	2025.09.04	2.77%	50,000,000	50,000,000
	Public offering bonds No.2-3	2015.09.04	2027.09.04	2.97%	50,000,000	50,000,000
Wirye Energy Service Co., Ltd.	Public offering bonds No.1-1	2014.12.09	2024.12.09	3.45%	200,000,000	200,000,000
	Public offering bonds No.1-2	2014.12.09	2026.12.09	3.68%	50,000,000	50,000,000
	Public offering bonds No.2-1	2017.10.27	2020.10.27	3.32%	125,000,000	-
	Public offering bonds No.2-2	2017.10.27	2022.10.27	3.82%	10,000,000	-
Narae Energy Service Co., Ltd.	Public offering bonds No.1	2013.02.13	2018.02.13	3.28%	80,000,000	80,000,000
					2,005,000,000	1,880,000,000
	Less: Discount on bonds				(5,175,631)	(4,860,016)

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Less: Current portion of bonds

(379,893,704) (259,912,534)
₩ 1,619,930,665 ₩ 1,615,227,450

18. Other Finance Liabilities

Other finance liabilities as at December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

	2017		2016	
	Non-current	Current	Non-current	Current
Guarantee deposits received	₩ 5,380,628	₩ 6,051,784	₩ 5,353,454	₩ 5,802,348
Non-trade accounts payable	-	309,301,823	-	77,919,151
Accrued expenses	-	124,759,355	-	78,238,150
	<u>₩ 5,380,628</u>	<u>₩ 440,112,962</u>	<u>₩ 5,353,454</u>	<u>₩ 161,959,649</u>

19. Net Defined Benefit Liabilities

Details of net defined benefit liabilities as at December 31, 2017 and 2016, are as follows:

(In thousands of Korean won)

	2017	2016
Present value of defined benefit obligations	₩ 134,701,059	₩ 128,115,660
Fair value of plan assets	(135,580,320)	(121,571,805)
Net defined benefit liabilities/assets	<u>₩ (879,261)</u>	<u>₩ 6,543,855</u>

Changes in the present values of defined benefit obligations for the years ended December 31, 2017 and 2016, are as follows:

(In thousands of Korean won)

	2017	2016
Beginning balance	₩ 128,115,660	₩ 115,203,155
Current service costs	15,236,620	14,393,570
Interest costs	3,034,303	2,787,759
Remeasurements	(3,964,672)	999,110
Benefits paid	(9,138,842)	(7,289,086)
Others	1,417,990	2,021,152
Ending balance	<u>₩ 134,701,059</u>	<u>₩ 128,115,660</u>

Changes in the fair value of plan assets for the years ended December 31, 2017 and 2016, are as follows:

(In thousands of Korean won)

	2017	2016
Beginning balance	₩ 121,571,805	₩ 110,183,794
Interest income	3,177,505	2,834,223
Remeasurements	(790,961)	(959,962)
Employers' contributions	17,426,501	16,354,535
Benefits paid	(7,236,863)	(7,786,856)
Others	1,432,333	946,071
Ending balance	<u>₩ 135,580,320</u>	<u>₩ 121,571,805</u>

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Plan assets as at December 31, 2017 and 2016, consist of the following:

<i>(In thousands of Korean won)</i>	2017		2016	
Equity instruments	₩	1,900,654	₩	155,046
Debt instruments		66,161,418		76,411,266
Time deposits		67,518,248		45,005,493
	₩	<u>135,580,320</u>	₩	<u>121,571,805</u>

The rate used to discount defined benefit obligations shall be determined by reference to market yields at the date of the statement of financial position on high quality corporate bonds.

The currency and term of the corporate bonds shall be consistent with the currency and estimated term of the post-employment benefit obligations.

The principal actuarial assumptions as at December 31, 2017 and 2016, are as follows:

	2017	2016
Discount rate	3.1 - 3.2%	2.5 - 2.8%
Inflation rate	2.0%	2.0%
Future salary growth rate	2.8 - 5.1%	2.9 - 5.1%

The sensitivity of the defined benefit obligations as at December 31, 2017, to changes in the weighted principal assumptions is:

	Effect on defined benefit obligations		
	Changes in principal assumption	Increase in principal assumption	Decrease in principal assumption
Discount rate	0.5%P	3.4% decrease	3.7% increase
Salary growth rate	0.5%P	3.7% increase	3.5% decrease

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

<i>(in thousands of Korean won)</i>	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years	Total
Pension benefits	₩ 7,350,210	₩ 29,487,365	₩ 29,844,317	₩ 289,518,137	₩ 356,200,029

The weighted average of maturities of the defined benefit obligations is 8.8 years and estimated expenses related to the defined benefit plan for the year ending December 31, 2017, is ₩ 14,141,091 thousand.

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20. Other Liabilities

Details of other liabilities as at December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>	2017		2016	
	Non-current	Current	Non-current	Current
Other long-term employee benefits ¹	₩ 1,331,196	-	₩ 1,270,675	₩ -
Advances received	-	4,351,904	-	4,148,525
Withholdings	-	13,360,462	-	13,311,101
Unearned revenues	-	5,045,464	-	1,068,627
Provision for restoration	2,030,269	-	1,661,115	-
Emission obligations	-	41,216,173	-	1,556,429
	<u>₩ 3,361,465</u>	<u>63,974,003</u>	<u>₩ 2,931,790</u>	<u>₩ 20,084,682</u>

¹ Recognized in relation to long-term employee benefits provided to employees with long service periods, and the same accounting methodology as used for defined benefit obligations was used.

Changes emission obligations for the years ended December 31, 2017 and 2016, are as follows:

<i>(In thousands of Korean won)</i>	2017	2016
Beginning balance	₩ 1,556,429	₩ 2,638,285
Addition (reversal)¹	39,659,744	(1,081,856)
Ending balance	<u>₩ 41,216,173</u>	<u>₩ 1,556,429</u>

¹ Expected emission of carbon gases for the year ended December 31, 2017 is 2,490,034 tons and free allocated emission credit is 1,556,423 tons. The Group accrued the liability for estimated expenses due to the excess of annual emission allowance.

21. Share Capital and Share Premium

The Company's number of authorized shares is 100,000,000 shares. Total number of ordinary shares issued is 46,401,990 shares with the par value of ₩ 5,000 per share as at December 31, 2017.

Details of changes in capital stock and Share Premium during the years ended December 31, 2017 and 2016 are as follows.

<i>in thousands of Korean won)</i>	Number of Shares	Ordinary shares	Share Premium	Total
January 1, 2016	41,761,791	₩ 221,058,960	₩ 420,107,124	₩ 641,166,084
December 31, 2016	41,761,791	221,058,960	420,107,124	641,166,084
January 1, 2017	41,761,791	221,058,960	420,107,124	641,166,084
Issuance of shares	4,640,199	23,200,995	₩ 654,455,176	₩ 677,656,171
December 31, 2017	<u>46,401,990</u>	<u>₩ 244,259,955</u>	<u>₩ 1,074,562,299</u>	<u>₩ 1,318,822,254</u>

The Company retired 2,450,001 treasury shares in 2009. Accordingly, as at December 31, 2017 share capital does not agree with the total amount of face value of the shares issued.

22. Retained Earnings

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Retained earnings as at December 31, 2017 and 2016, consist of the following:

(In thousands of Korean won)

	2017		2016	
Legal reserves	₩	110,529,480	₩	110,529,480
Unappropriated retained earnings		<u>937,787,078</u>		<u>767,658,754</u>
	₩	<u>1,048,316,558</u>	₩	<u>878,188,234</u>

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23. Other Components of Equity

Other components of equity as at December 31, 2017 and 2016, consist of the following:

<i>(In thousands of Korean won)</i>	2017		2016	
Cumulative other comprehensive income				
Share of other comprehensive income of associates	₩	(40,043,850)	₩	(17,293,081)
Change in value of available-for-sale financial assets		1,770,779		268,658
Gain(loss) on valuation of derivatives		(1,889,179)		(11,429,106)
Exchange differences on translation of foreign operations		(33,155,838)		60,401,629
Other capital surpluses				
Gain on statutory merger		257,586,894		257,586,894
Consolidated capital surplus		91,541,576		54,919,167
Treasury stock		(8,807,669)		(8,807,669)
share options		149,041		-
Discount on stock issuance		(6,573,551)		(6,573,551)
Other paid-in capital				
Hybrid bonds		723,918,899		723,918,899
	₩	<u>984,497,102</u>	₩	<u>1,052,991,840</u>

Changes in accumulated other comprehensive income for the years ended December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>	2017		
	Beginning balance	Increase (decrease)	Ending balance
Share of other comprehensive income of associates	₩ (17,293,081)	₩ (22,750,769)	₩ (40,043,850)
Change in value of available-for-sale financial assets	268,658	1,502,121	1,770,779
Gain (loss) on valuation of derivatives	(11,429,106)	9,539,926	(1,889,180)
Exchange differences on translation of foreign operations	60,401,629	(93,557,467)	(33,155,838)
	<u>₩ 31,948,100</u>	<u>₩ (105,266,189)</u>	<u>₩ (73,318,089)</u>

<i>(in thousands of Korean won)</i>	2016		
	Beginning balance	Increase (decrease)	Ending balance
Share of other comprehensive income of associates	₩ 33,793,138	₩ (51,086,219)	₩ (17,293,081)
Change in value of available-for-sale financial assets	276,048	(7,390)	268,658
Gain (loss) on valuation of derivatives	(9,040,153)	(2,388,953)	(11,429,106)
Exchange differences on translation of foreign operations	35,334,444	25,067,185	60,401,629
	<u>₩ 60,363,477</u>	<u>₩ (28,415,377)</u>	<u>₩ 31,948,100</u>

Changes in accumulated other comprehensive income represent amounts net of tax effect.

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Details of hybrid bonds as at December 31, 2017, are as follows:

<i>(in thousands of Korean won)</i>	Issuance Date	Maturity Date	Interest rate	2017	2016
1 st hybrid bond in foreign currency ¹	2014.11.26	2074.11.26	4.875%	₩ 329,520,000	₩ 329,520,000
1-1 st hybrid bond in Korean won	2015.07.15	2045.07.15	3.903%	270,000,000	270,000,000
1-2 nd hybrid bond in Korean won	2015.07.15	2045.07.15	3.853%	130,000,000	130,000,000
				(5,601,101)	(5,601,101)
Less: Discount on bonds				₩ 723,918,899	₩ 723,918,899

¹ Exchange rate of KRW1,098.4/USD1 applied to USD 300,000,000.

Details of hybrid bond as at December 31, 2017, are as follows:

	Overseas	Domestic	
	1st	1-1st	1-2nd
Number of issuance			
Issuance date	2014.11.26	2015.07.15	2015.07.15
Period of adjustment of interest rate		5 years	
Criteria of adjustment of interest rate	5-year US Treasury + initial added rate	5-year Treasury + initial added rate	
Added rate	Add 0.25% to the initial added rate after 10 to 25 years from the issuance date Add 1.00% to the initial added rate after 25 years from the issuance date		
Period of payment of interest	Semiannually	Quarterly	
Postponement of payment of interest	Depending on the Company's option, interest payments can be deferred until the next payment date including accrued interest.		
Early redemption	Early redemption is possible after five years from the issuance date		
Extension of maturity	Depending on the Company's option, the maturity can be extended with the same maturity on the maturity date.		
Priority of payment	In the event of liquidation, it will have the same priority claim as preferred stock.		

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24. Selling and Administrative Expenses

Selling and administrative expenses for the years ended December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>		2017		2016
Salaries	₩	143,441,606	₩	137,056,269
Post-employment benefits		12,661,108		11,982,853
Welfare expense		28,975,735		26,208,916
Travel expense		5,123,630		4,014,575
Communication expense		5,270,964		5,303,897
Utilities expense		5,519,239		5,770,164
Taxes and dues		16,985,590		16,770,975
Supplies expense		4,937,220		3,382,440
Rent		10,449,169		11,592,610
Depreciation		97,618,254		98,041,701
Amortization		5,733,213		7,205,742
Repairs expense		5,426,896		3,462,614
Vehicles maintenance expense		2,588,744		2,486,437
Insurance expense		1,190,928		1,186,821
Advertisement expense		2,661,030		2,420,030
Management and security service expense		3,395,038		3,065,633
Training and research expense		4,236,180		3,938,779
Service fees		108,106,061		102,278,024
Professional service fees		7,923,480		8,422,902
Bad debts expense		1,161,181		(76,032)
Entertainment expense		4,522,055		4,104,785
Conference expense		1,962,083		1,383,494
Others		5,667,477		4,304,569
	₩	<u>485,556,881</u>	₩	<u>464,308,198</u>

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25. Other Income and Other Expenses

Other income and other expenses for the years ended December 31, 2017 and 2016, are as follows:

<i>(In thousands of Korean won)</i>		2017		2016
Other income				
Dividend income	₩	817,508	₩	5,126,923
Rental income		43,225		36,850
Gain on disposal of property, plant and equipment		844,896		658,516
Gain on disposal of intangible assets		70,000		198,968
Gain on disposal of available-for-sale financial assets		-		37,815
Construction deferred income		20,603,423		16,353,185
Other non-operating expenses		77,040,777		50,783,309
Miscellaneous gains		101,479		164,363
	₩	<u>99,521,308</u>	₩	<u>73,359,929</u>
Other expenses				
Loss on disposal of property, plant and equipment	₩	730,026	₩	1,075,922
Loss on disposal of intangible assets		33,515		525,535
Impairment losses on property, plant and equipment		12,979,160		2,994,417
Losses on abandonment of property, plant and equipment		3,078,097		-
Impairment losses on intangible assets		366,552		303,129
Loss on disposal of available-for-sale financial assets		-		2,270,217
Impairment losses on available-for-sales assets		86,858		51,548
Donations		9,266,675		5,251,830
Miscellaneous losses		31,426,624		23,729,067
	₩	<u>57,967,507</u>	₩	<u>36,201,665</u>

26. Expenses by Nature

Expenses by nature for the years ended December 31, 2017 and 2016, are as follows:

<i>(In thousands of Korean won)</i>		2017		2016
Cost of trading goods sold	₩	2,914,953,584	₩	2,762,815,342
Raw materials used		1,302,545,571		463,266,307
Employee benefit expense		218,139,404		205,076,420
Depreciation and amortization		316,785,363		205,146,799
Advertising expense		2,661,185		2,420,030
Operating leases expense and rents		12,547,561		13,219,142
Other expenses		411,875,349		238,292,055
Total cost of sales and selling and administrative expenses	₩	<u>5,179,508,017</u>	₩	<u>3,890,236,095</u>

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27. Finance Income and Costs

Finance income and costs for the years ended December 31, 2017 and 2016, are as follows:

(In thousands of Korean won)

	2017		2016	
Finance income				
Interest income	₩	7,844,561	₩	4,895,584
Gain on foreign currency transactions		11,740,116		2,486,493
Gain on foreign currency translation		23,510,230		2,383,077
Gain on valuation of derivatives		36,590		3,187,567
Gain on transaction of derivatives		6,966,868		-
	₩	<u>50,098,365</u>	₩	<u>12,952,721</u>
Finance costs				
Interest expense	₩	102,727,768	₩	35,967,798
Loss on foreign currency transactions		3,948,756		2,559,020
Loss on foreign currency translation		59,189		7,028,080
Loss on valuation of derivatives		25,110,088		43,277
Loss on transaction of derivatives		7,237,041		1,193,895
	₩	<u>139,082,842</u>	₩	<u>46,792,070</u>

28. Income Tax

Income tax expense for the years ended December 31, 2017 and 2016, consists of the following:

(In thousands of Korean won)

	2017		2016	
Current tax				
Current tax on profits for the year	₩	76,141,614	₩	42,087,376
Adjustments to prior year income tax		892,135		175,952
Total current tax		<u>77,033,749</u>		<u>42,263,328</u>
Deferred tax				
Temporary differences		6,651,154		(4,694,835)
Income tax recognized directly in equity		6,219,726		17,793,120
Total deferred tax		<u>12,870,880</u>		<u>13,098,285</u>
Income tax expense	₩	<u>89,904,629</u>	₩	<u>55,361,613</u>

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Income tax recognized directly in equity as at December 31, 2017 and 2016, is as follows:

(in thousands of Korean won)	2017			2016		
	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Share of comprehensive income of associates	₩ (30,690,679)	₩ 7,412,380	₩ (23,278,299)	₩ (69,703,332)	₩ 17,580,160	₩ (52,123,172)
Change in value of available-for sale financial assets	1,975,416	(543,889)	1,431,527	(9,750)	2,360	(7,390)
Remeasurements of the net benefit liability	3,173,711	(648,765)	2,524,946	(1,959,072)	210,600	(1,748,472)
	<u>₩ (25,541,552)</u>	<u>₩ 6,219,726</u>	<u>₩ (19,321,826)</u>	<u>₩ (71,672,154)</u>	<u>₩ 17,793,120</u>	<u>₩ (53,879,034)</u>

The tax on the Group's profit before tax differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the consolidated entities as follows:

(In thousands of Korean won)	2017	2016
Profit before tax	₩ 464,229,786	₩ 253,735,910
Tax calculated at domestic tax rates	111,881,608	61,404,090
Adjustments:	-	-
Income not subject to tax	(35,352,655)	(20,241,006)
Expenses not deductible for tax purposes	23,350,537	8,560,057
Tax credits	(8,994,127)	(611,885)
Tax effect for which no deferred tax was recognized	2,971,875	7,402,559
Impact of change in tax rate	52,204	64,948
Adjustments to prior year income tax	(838,311)	175,952
Others	(3,166,502)	(1,393,102)
Income tax expense	<u>₩ 89,904,629</u>	<u>₩ 55,361,613</u>
Weighted average effective tax rate	19.37%	21.82%

Deferred tax expected to reverse after December 31, 2017, has been measured using the effective rate of 24.2% that will apply to future periods.

The analysis of deferred tax assets and deferred tax liabilities as at December 31, 2017 and 2016, is as follows:

(In thousands of Korean won)	2017	2016
Deferred tax assets		
to be recovered after more than 12 months	₩ 109,730,499	₩ 96,621,170
to be recovered within 12 months	<u>35,510,052</u>	<u>17,846,563</u>
	<u>145,240,551</u>	<u>114,467,733</u>
Deferred tax liabilities		
to be recovered after more than 12 months	(211,911,283)	(179,557,360)
to be recovered within 12 months	<u>(33,415,641)</u>	<u>(28,345,592)</u>
	<u>(245,326,924)</u>	<u>(207,902,952)</u>
Deferred tax liabilities, net	<u>₩ (100,086,373)</u>	<u>₩ (93,435,219)</u>

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Changes in deferred tax assets and liabilities during the year, without taking into consideration the offsetting of balances within the same tax jurisdiction, are as follows:

(in thousands
of Korean won)

	2017			
	Beginning balance	Statement of profit or loss	Other comprehensive income	Ending balance
Deferred tax assets				
Customer's contribution to construction costs	₩ 62,686,604	₩ 3,089,704	₩ -	₩ 65,776,308
Provision for impairment of receivables	1,662,926	(1,013,144)	-	649,782
Available-for-sale financial assets	4,157,506	(1,197,220)	(543,889)	2,416,397
Accrued expenses	10,060,494	18,430,602	-	28,491,096
Loss on foreign currency translation	15,116	-	-	15,116
Property, plant and equipment	5,339,069	6,230,351	-	11,569,420
Inventories	64,544	(9,095)	-	55,449
Provision for post-employment benefits	20,238,437	1,090,960	(754,938)	20,574,459
Tax loss carryforwards	-	1,745,034	-	1,745,034
Others	10,243,037	3,704,453	-	13,947,490
	<u>114,467,733</u>	<u>32,071,645</u>	<u>(1,298,827)</u>	<u>145,240,551</u>
Deferred tax liabilities				
Interest receivable	(1,364,623)	(4,582,105)	-	(5,946,728)
Employee welfare fund	(1,531,212)	138,504	-	(1,392,708)
Property, plant and equipment	(65,500,938)	(2,598,791)	-	(68,099,729)
Temporary depreciation provision	(64,528,626)	(3,087,609)	-	(67,616,235)
Provision for post-employment benefits	(19,373,720)	(1,871,083)	104,760	(21,140,043)
Investment securities	(49,956,984)	(30,518,853)	7,412,380	(73,063,457)
Others	(5,646,849)	(2,422,588)	1,413	(8,068,024)
	<u>(207,902,952)</u>	<u>(44,942,525)</u>	<u>7,518,553</u>	<u>(245,326,924)</u>
	<u>₩ (93,435,219)</u>	<u>₩ (12,870,880)</u>	<u>₩ 6,219,726</u>	<u>₩ (100,086,373)</u>

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(in thousands
of Korean won)

	2016			
	Beginning balance	Statement of profit or loss	Other comprehensive income	Ending balance
Deferred tax assets				
Customer's contribution to construction costs	₩ 57,737,319	₩ 4,949,285	₩ -	₩ 62,686,604
Provision for impairment of receivables	1,937,617	(274,691)	-	1,662,926
Available-for-sale financial assets	4,317,611	(162,465)	2,360	4,157,506
Accrued expenses	10,602,744	(542,250)	-	10,060,494
Loss on foreign currency translation	15,116	-	-	15,116
Property, plant and equipment	6,594,870	(1,255,801)	-	5,339,069
Inventories	23,271	41,273	-	64,544
Provision for post-employment benefits	18,708,293	1,423,046	107,098	20,238,437
Investment securities	(515,018)	-	515,018	-
Others	2,282,913	7,960,124	-	10,243,037
	<u>101,704,736</u>	<u>12,138,521</u>	<u>624,476</u>	<u>114,467,733</u>
Deferred tax liabilities				
Interest receivable	(2,248,474)	883,851	-	(1,364,623)
Employee welfare fund	(2,066,468)	535,256	-	(1,531,212)
Property, plant and equipment	(60,574,052)	(4,926,886)	-	(65,500,938)
Temporary depreciation provision	(59,681,106)	(4,847,520)	-	(64,528,626)
Provision for post-employment benefits	(17,865,717)	(1,611,505)	103,502	(19,373,720)
Investment securities	(54,989,365)	(12,032,761)	17,065,142	(49,956,984)
Others	(2,409,608)	(3,237,241)	-	(5,646,849)
	<u>(199,834,790)</u>	<u>(25,236,806)</u>	<u>17,168,644</u>	<u>(207,902,952)</u>
	<u>₩ (98,130,054)</u>	<u>₩ (13,098,285)</u>	<u>₩ 17,793,120</u>	<u>₩ (93,435,219)</u>

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Amounts of deductible temporary differences, unused tax loss carryforwards and tax credit which were not recognized as deferred tax assets as at December 31, 2017, are as follows:

<i>(in thousands of Korean won)</i>	Maturity	Amounts
Deductible temporary differences	-	₩ 157,516,865
Tax loss carryforwards	2024	3,305,473
	2025	3,428,879
	2026	8,869,331
	2027	8,925,231
Tax credit	2018	757,602
	2019	374,998
	2020	17,400,733
	2021	244,868
	2022	9,101,429

Taxable temporary difference of ₩ 343,450,021 thousand (2016: ₩ 189,778,371 thousand) and deductible temporary differences of ₩ 158,830,227 thousand (2016: ₩ 120,829,073 thousand) arising on investments in subsidiaries, joint ventures and associates were not recognized as deferred tax assets and liabilities as these will not reverse in the foreseeable future.

29. Earnings per Share

Basic earnings per share is calculated by dividing the profit attributable to owners of the Company by the weighted average number of ordinary shares outstanding during the year.

<i>(In Korean won)</i>	2017	2016
Profit from continuing operations attributable to owners of the Controlling Company	₩ 350,437,947,661	₩ 172,144,376,731
Total	<u>₩ 350,437,947,661</u>	<u>₩ 172,144,376,731</u>
Weighted average number of ordinary shares outstanding	42,333,870	41,761,791
Basic earnings per share		
Continuing operations basic earnings per share	₩ 8,278	₩ 4,122

Diluted earnings per share and basic earnings per share are the same because there are no potential dilutive common shares.

30. Dividends

The dividends paid in 2017 and 2016 were ₩ 150,843,589 thousand (₩3,612 per share) and ₩216,117,268 thousand (₩5,175 per share), respectively.

A dividend in respect of the year ended December 31, 2017, has not yet been determined. These financial statements do not reflect these dividend payables.

31. Cash Generated from Operations

Adjustments to reconcile profit for the year to net cash provided by operating activities for the years ended December 31, 2017 and 2016, are as follows:

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<i>(In thousands of Korean won)</i>	2017		2016	
Interest expense	₩	102,727,768	₩	35,967,798
Income tax expense		89,904,629		55,361,613
Depreciation		310,654,744		197,576,127
Amortization		6,130,619		7,570,672
Post-employment benefits		15,093,418		14,347,107
(Reversal of) Impairment loss on receivables		1,161,181		(75,645)
Loss on foreign currency translation		59,189		7,028,080
Share of loss of associates		2,801,620		7,027,624
Losses on disposal of available-for-sale financial assets		-		2,270,217
Impairment losses on available-for-sales financial assets		86,858		51,548
Losses on valuation of derivatives		25,110,088		43,277
Losses on disposal of property, plant, and equipment		730,026		1,075,922
Losses on abandonment of property, plant and equipment		3,078,097		-
Impairment losses on property, plant, and equipment		12,979,160		2,994,417
Losses on disposal of intangible assets		33,515		525,535
Impairment losses on intangible assets		366,552		303,129
Interest income		(7,844,561)		(4,895,584)
Dividends income		(817,508)		(5,126,923)
Gains on foreign currency translation		(23,510,230)		(2,383,077)
Gains on disposal of associates		(13,765,622)		(38,921,400)
Reversal of impairment losses on associates		-		(762,861)
Gains on disposal of property, plant and equipment		(844,896)		(658,516)
Gains on disposal of intangible assets		(70,000)		(198,968)
Gains on disposal of available-for-sale financial assets		-		(37,815)
Share of profit of associates		(144,978,362)		(63,233,481)
Gain on valuation of derivatives		(36,590)		(3,187,567)
Construction deferred income		(20,603,423)		(16,353,185)
Others		7,253,147		3,907,247
	₩	<u>365,699,419</u>	₩	<u>200,215,291</u>

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Changes in operating assets and liabilities for the years ended December 31, 2017 and 2016, are as follows:

<i>(In thousands of Korean won)</i>	2017		2016	
Decrease (increase) in trade receivables	₩	(210,170,602)	₩	32,427,345
Increase in non-trade receivables		(3,808,205)		(1,819,012)
Decrease (increase) in accrued revenues		(21,866,307)		4,960,428
Increase in advance payments		(15,069,509)		(20,833,089)
Increase in prepaid expenses		(13,207,352)		(27,030,299)
Decrease (increase) in prepaid value added tax		4,452,674		(495,491)
Increase in inventories		(51,323,653)		(28,937,683)
Decrease (increase) in long-term guarantee deposits provided		427,136		(1,495,690)
Decrease (increase) in long-term prepaid expenses		4,636		(39,423)
Increase (decrease) in trade payables		164,003,449		(45,965,060)
Increase in advances received		203,380		1,777,548
Increase (decrease) in withholdings		(1,081,769)		4,802,132
Decrease in unearned revenue		(698,657)		(656,874)
Increase (decrease) in non-trade payables		18,880,267		(5,186,882)
Increase in accrued expense		83,555,637		3,469,488
Increase in value added tax withheld		296,880		3,765,110
Increase (decrease) in other current liabilities		1,042,377		(1,081,856)
Payment of post-employment benefits		(9,138,842)		(7,289,086)
Increase in plan assets		(10,189,638)		(8,567,679)
Decrease in guarantee deposits received		(100)		(419,488)
Decrease (increase) in derivatives related to operating activities		-		359,074
Others		(29,612,593)		4,412,932
	₩	<u>(93,300,791)</u>	₩	<u>(93,843,555)</u>

Significant transactions not affecting cash flows are as follows:

<i>(In thousands of Korean won)</i>	2017		2016	
Reclassification of construction-in-progress to specific property, plant and equipment	₩	2,253,378,068	₩	247,841,375
Reclassification of borrowings to current portion of borrowings		441,067,092		275,712,575

Changes in liabilities arising from financial activities for the years ended December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>	Short-term borrowings	Bond	Current portion of bonds	Current portion of borrowings	Long-term borrowings	Total
At January 1, 2017	₩ 276,652,912	₩1,615,227,450	₩ 259,912,534	₩ 12,942,350	₩ 1,167,328,987	₩ 3,332,064,233
Cash flow	(148,106,980)	383,478,383	(260,000,000)	(12,942,350)	271,590,257	234,019,310
Transfer	-	(379,712,118)	379,712,118	162,817,410	(162,817,410)	-
Others	1,385,779	936,950	269,052	-	(266,413)	2,325,368
Exchange	(3,557,317)	-	-	(5,349,601)	(53,277,167)	(62,184,085)

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differences						
At December 31, 2017	₩ 126,374,394	₩ 1,619,930,665	₩ 379,893,704	₩ 157,467,809	₩ 1,222,558,254	₩ 3,506,224,826

32. Contingencies and Commitments

Details of commitments on borrowings as at December 31, 2017, are as follows:

(in thousands of Korean won, in thousands of US dollars)

	Financial institution	Details	Amount of Limit
SK E&S Co., Ltd.	Hana Bank	Line of Credit	₩ 20,000,000
	Kookmin Bank and others	Consumer loans	52,000,000
	Hana Bank and others	Line of Credit	230,000,000
	Korea Exim Bank	Line of Credit	USD 420,000
Gangwon City Gas Co., Ltd.	Korea Development Bank and others	Derivative contract	USD 343,858
	NH Bank and others	Bank overdrafts	₩ 8,000,000
	Kookmin Bank and others	Line of Credit	18,000,000
Ko-one Energy Service Co., Ltd.	Woori Bank	Consumer loans	30,000,000
	NH Bank	Bank overdrafts	5,000,000
Busan City Gas Co., Ltd.	Kookmin Bank	Line of Credit	5,000,000
Yeongnam Energy Service Co., Ltd.	NH Bank and others	Bank overdrafts	15,000,000
	Kookmin Bank and others	Consumer loans	26,000,000
Chungcheong Energy Service Co., Ltd.	Citibank Korea and others	Bank overdrafts	16,000,000
	Woori Bank and others	Line of Credit	25,000,000
Jeonnam City Gas Co., Ltd.	NH Bank and others	Bank overdrafts	15,000,000
Jeonbuk Energy Service Co., Ltd.	NH Bank	Bank overdrafts	7,000,000
	Kookmin Bank	Line of Credit	5,000,000
Wirye Energy Service Co., Ltd.	Kookmin Bank and others	Line of Credit	135,000,000
	Hana Bank	Consumer loans	10,000,000
Paju Energy Service Co., Ltd.	Korea Development Bank and others	PF contract	579,500,000
Narae Energy Service Co., Ltd	Korea Development Bank and others	Line of Credit	387,500,000
		Consumer loans	2,000,000
		Derivative contract	387,500,000
Prism Energy International Pte., Ltd.(formerly, SK LNG Trading J.ARON&COMPANY(SINGAPORE) Pte., Ltd.).	Citibank Singapore	Letter of Credit	USD 215,000
		Derivative contract	USD 149,000
SK E&S Australia Pty Ltd.	Bank of America and others	Line of Credit	USD 140,000
SK E&S Americas, Inc.	Korea Exim Bank	Line of Credit	USD 160,000
CAILIP Gas Marketing, LLC	JP Morgan Chase Bank, National Association and others	Derivative contract	USD 121,000
		₩	1,978,500,000
		USD	1,548,858

SK E&S Co., Ltd. and Subsidiaries
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Details of payment guarantees provided by and to the Group as at December 31, 2017, are as follows:

<i>(in thousands of Korean won)</i>	Provided by	Beneficiary	Guaranteed by	Details	Amounts
Payment guarantees	Seoul Guarantee Insurance Co., Ltd.	SK E&S Co., Ltd.	-	Performance guarantee and others	₩ 392,713
		Yeongnam Energy Service Co., Ltd.	-	Maintenance performance guarantee and license guarantee	1,196,156
		Chungcheong Energy Service Co. Ltd.	-	Maintenance performance guarantee and execution of construction	809,240
		Ko-one Energy Service Co., Ltd.	-	Performance guarantee	1,126,084
		Busan City Gas Co., Ltd.	-	Management and operation of group energy facilities and others	2,347,865
		Jeonnam City Gas Co., Ltd.	-	Gas rate guarantee and maintenance performance guarantee	6,163,772
		Jeonbuk Energy Service Co., Ltd.	-	Maintenance performance guarantee and performance guarantee	113,749
		Paju Energy Service Co., Ltd.	-	Deposit guarantee for management of construction safety and others	14,074,688
		Wirye Energy Service Co., Ltd.	-	Management of group safety and others	4,337,293
		Narae Energy Service Co., Ltd	-	Performance guarantee	66,516
Fund supplement	SK E&S Co., Ltd.	Boryeong LNG Terminal Co., Ltd	Holders of public offering bonds PF syndicate	Principle and related interest on borrowing PF contract	360,000,000 Excess costs
Performance guarantee	SK Holdings Co., Ltd.	SK E&S Co., Ltd.	FLNG Liquefaction 3, LLC	Usage of liquefaction	Service fee
	Prism Energy International Pte., Ltd. (formerly, SK LNG Trading Pte., Ltd.)	SK Shipping Co., Ltd.	HHIENS1 Shipholding S.A.	BBCHP	Charterage
			HHIENS2 Shipholding S.A.		

SK E&S Co., Ltd. and Subsidiaries

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Details of significant pending litigations as at December 31, 2017, are as follows:

(in thousands of Korean won)

	Defendant	Details	Amounts	Progress
The Group as a plaintiff				
SK E&S Co., Ltd.	Head of Seoul customs office	Cancellation of tariff imposition	2,251,754	Second trial
Ko-one Energy Service Co., Ltd.	Industrial Bank of Korea	Compensation for non-performance and damages	10,000,000	Second trial
The Group as a defendant				
	Plaintiff	Details	Amounts	Progress
Korea Veterans Health Service	Busan City Gas Co., Ltd.	Claim for return of payment on over-measuring	3,637,391	Ruled in favor of the Group in the first trial. The plaintiff appealed the case.

The outcome of these pending litigations and the effects on the financial statements cannot be reasonably determined as at December 31, 2017.

Blank notes and checks provided by the Group as collaterals as at December 31, 2017, are as follows:

	Provided to	Type	Quantity	Purpose
SK E&S Co., Ltd.	Korea Energy Agency	Blank notes	3	Collateral for long-term borrowings
SK E&S Co., Ltd.	Korea Energy Agency	Blank check	6	Collateral for long-term borrowings
Gangwon City Gas Co., Ltd.	Korea Gas Corporation	Blank check	1	Collateral for natural gas supply agreement

Assets pledged as collaterals by the Group as at December 31, 2017, are as follows:

Collateral	Provided by	Provided to	Book amount	Details
Property, plant and equipment	Gangwon City Gas Co., Ltd.	Korea Development Bank	₩ 6,156,835	Borrowings
Land and buildings	Jeonnam City Gas Co., Ltd.	Dongbu insurance Co., Ltd. and others	4,942,462	Deposits received
Investment properties	Busan City Gas Co. Ltd.	Megamart Co., Ltd. and others	70,653,191	Deposits and borrowings
Cash and cash equivalents	Paju Energy Service Co., Ltd.	Korea Development Bank and others, the Project Financing syndicate	65,070,813	PF borrowings
Short-term financial instruments	Paju Energy Service Co., Ltd.	Korea Development Bank and others, the Project Financing syndicate	94,273,603	PF borrowings

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Property, plant and equipment	Paju Energy Service Co., Ltd.	Korea Development Bank and others, the Project Financing syndicate	1,456,756,993	PF borrowings
Property, plant and equipment	Wirye Energy Service Co., Ltd.	Kookmin Bank and others	216,704,875	Facility loans
Short-term financial instruments	Narae Energy Service Co., Ltd.	Korea Development Bank and others	16,974,697	Facility loans
Property, plant and equipment	Narae Energy Service Co., Ltd.	Korea Development Bank and others	615,953,638	Facility loans

Details of collaterals provided by the Controlling Company in relation to PF borrowings and facility loans as at December 31, 2017, are as follows:

	Beneficiary	Secured assets	Amount	Provided to
Subsidiaries	Paju Energy Service Co., Ltd.	Equity securities of Paju Energy Service Co., Ltd	₩ 550,000,000	Korea Development Bank and others, the Project Financing syndicate
	Narae Energy Service Co., Ltd.	Equity securities of Narae Energy Service Co., Ltd.	192,348,307	Korea Development Bank and Woori Bank
Joint venture	Boryeong LNG Terminal Co., Ltd.	Equity securities of Boryeong LNG Terminal Co., Ltd.	110,000,000	Woori Bank and others, the Project Financing syndicate
Associate	Busan Green Energy	Equity securities of Busan Green Energy	7,239,715	Shinhan Bank and others, the Project Financing syndicate

SK E&S Co., Ltd. and Subsidiaries

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Details of commitments as at December 31, 2017, are as follows:

Commitment	Company	Counterparty	Contract period
Long-term natural gas supply agreement ¹	Gangwon City Gas Co., Ltd. and seven other subsidiaries	Korea Gas Corporation	-
Agreement to purchase LNG	SK E&S Co., Ltd.	Tangguh PSC Contractor Parties	2006.1~2026.7
Gas turbine maintenance and repair agreement	SK E&S Co., Ltd.	GE International Inc.	2004.6~2026.12 (estimate)
Natural gas storage and vaporization service agreement	SK E&S Co., Ltd.	Posco Co., Ltd.	2005.6~2025.12
Lease agreement on the power generator and pylon site	SK E&S Co., Ltd.	Posco Co., Ltd.	2003.8~2028.12
Longterm Maintenance Program	Paju Energy Service Co., Ltd. (formerly, PMP Co., Ltd.)	Siemens AG and others	2014.6~2031.6 (estimate)
Longterm Maintenance Program	Wirye Energy Service Co., Ltd.	Siemens AG and others	2015.1~2032.1 (estimate)
Longterm Maintenance Program	Narae Energy Service Co., Ltd.	Doosan Heavy Industries & Construction Co., Ltd	12 years from 2012
Natural gas storage and liquefaction service agreement	SK E&S LNG, LLC	FLNG Liquefaction 3, LLC	20 years from 2019
Natural gas storage and vaporization service agreement	SK E&S Co., Ltd Wirye Energy Service Co., Ltd., Paju Energy Service Co., Ltd.	Boryeong LNG Terminal Co., Ltd.	20 years from 2017
Use of pipe facility	Wirye Energy Service Co., Ltd., Paju Energy Service Co., Ltd.	Korea Gas Corporation	20 years from 2017
Use of pipelines	SK E&S LNG, LLC	Kinder Morgan, Inc.	20 years from 2019
Agreement to purchase LNG	Prism Energy International Pte., Ltd (formerly, SK LNG Trading Pte. Ltd.)	Chevron Australia Pty Ltd and others	2017.1~2022.3
Long-term ship chartering agreement	Prism Energy International Pte., Ltd (formerly, SK LNG Trading Pte. Ltd.)	SK Shipping Co., Ltd.	20 years from delivery date
Operation and maintenance agreement	Narae Energy Service Co., Ltd.	Jeonbuk co-generation Co., Ltd., Gimcheon energy service Co., Ltd.	2015.1~2025.1
Operation and maintenance agreement	Narae Energy Service Co., Ltd.	Pyeongtaek energy service Co., Ltd.	2015.1~2018.3

¹ Supply quantities are determined annually, and the supply price of natural gas is approved by the Minister of Trade, Industry and Energy

SK E&S Co., Ltd. and Subsidiaries

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Details of construction contracts as at December 31, 2017, are as follows:

(in thousands of Korean won)

Contract	Company	Counterparty	Contract period	Contract amount
Construction of facilities of accessing power transmission	Wirye Energy Service Co., Ltd.	Korea Electric Power Corporation	2015.8 ~ 2018.4	8,472,000
Construction of heat pipes	Narae Energy Service Co., Ltd.	junghoenc CO., Ltd. And others	2017.8 ~ 2018.12	3,725,000

Details of resource development contracts as at December 31, 2017, are as follows:

(in thousands of US dollars)

Contact	Company	Counterparty	Percentage of ownership	Contract amount	Executing amount
Australian Barossa-Caldita Gas field	SK E&S Australia Pty Ltd.	ConocoPhillips Company and others	37.5%	USD 310,000	USD 280,000
USA Woodford field	DewBlaine Energy, LLC	Continental Resources, Inc.	49.9%	USD 360,000	USD 259,032

Apart from the above contract amount, the Group has the obligation to pay the development costs corresponding to the percentage of ownership.

In December 2017, value-added tax amounting to ₩ 161,919,407 thousand related to the LNG import price was imposed to the Controlling Company by the relevant tax authority. As at December 31, 2017, the Company has recognized an amount of ₩ 160,575,100 thousand as advance payment in the statement of financial position.

As at December 31, 2017 and 2016, the Company has satisfied the requirements for financial ratios and other financial obligations related to borrowings, corporate bonds and derivative financial instruments.

SK E&S Co., Ltd. and Subsidiaries
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33. Information on Non-controlling Interests

Profit or loss allocated to non-controlling interests and accumulated non-controlling interests of subsidiaries that are material to the Group for the years ended December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

(in thousands of Korean won)	2017										
	Ratio of Non-controlling Interests	Beginning book amount		Gain (loss)		Dividends received		Capital transaction		Others	Ending book amount
Busan City Gas Co., Ltd.	25.95%	₩	164,137,254	₩	11,716,198	₩	(1,297,798)	₩	-	₩ (34,163,778)	₩ 140,391,876
Paju Energy Service Co., Ltd. (formerly, PMP Co., Ltd.)	-		247,993,296		12,097,912		(12,097,912)		-	(630,395)	247,362,901
Wirye Energy Service Co., Ltd.	4.83%		10,766,694		61,049		-		-	(11,519)	10,816,224
SK E&S Hong Kong Co., Ltd.	12.97%		13,691,294		12,050		-		-	(3,790,644)	9,912,700
		₩	436,588,538	₩	23,887,209	₩	(13,395,710)	₩	-	₩ (38,596,336)	₩ 408,483,701

(in thousands of Korean won)

(in thousands of Korean won)

	2016												
	Ratio of Non-controlling Interests		Beginning book amount		Gain (loss)		Dividends received		Capital transaction		Others		Ending book amount
Busan City Gas Co., Ltd.	32.68%	₩	158,548,370	₩	8,458,214	₩	(1,634,071)	₩	-	₩	(1,235,259)	₩	164,137,254
Paju Energy Service Co., Ltd. (formerly, PMP Co., Ltd.)	-		170,579,598		10,348,090		(10,348,090)		77,413,698		-		247,993,296
Wirye Energy Service Co., Ltd.	4.83%		11,121,848		(356,344)		-		-		1,190		10,766,694
SK E&S Hong Kong Co., Ltd.	16.34%		4,860,539		7,779,960		-		-		1,050,795		13,691,294
		₩	345,110,355	₩	26,229,920	₩	(11,982,161)	₩	77,413,698	₩	(183,274)	₩	436,588,538

SK E&S Co., Ltd. and Subsidiaries
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Hybrid bond classified as non-controlling interests as at December 31, 2017, are as follows:

<i>(in thousands of Korean won)</i>	Issuance date	Maturity date	Interest rate	2017	2016
Subordinated debt	2015.10.12	2022.11.01	4.80%	₩ 250,000,000	₩ 250,000,000
Discount of bond				(2,637,099)	(2,006,704)
				<u>₩ 247,362,901</u>	<u>₩ 247,993,296</u>

Details of conditions of hybrid bond classified as non-controlling interests as at December 31, 2017, are as follows:

	Interest payment	Conversion	Redemption Option
Term	Quarterly	2022.11.01	From the date 5 years after the initial issuance to 2022.10.31
Amount	Principal	Principal including deferred interest payments	Full or Partial
Note	Same priority as preferred stock upon liquidation	7/25 and 18/25 of amounts are converted to common and preferred stock, respectively with par value (₩5,000 per share).	Commission for redemption option : 0.5% of redemption amount

Summarized statements of financial position for each subsidiary with non-controlling interests as at December 31, 2017 and 2016, are as follows:

<i>(in thousands of Korean won)</i>	2017				
	Current assets	Non- current assets	Current liabilities	Non-current liabilities	Equity
Busan City Gas Co., Ltd.	₩ 329,723,792	₩ 577,441,518	₩ 233,409,649	₩ 92,837,694	₩ 580,917,967
Paju Energy Service Co., Ltd.	351,313,396	1,471,764,508	137,465,253	814,218,292	871,394,359
Wirye Energy Service Co., Ltd.	98,833,406	716,316,667	95,797,246	495,629,911	223,722,916
SK E&S Hong Kong Co., Ltd.	71,255,266	5,464,597	-	-	76,719,863

<i>(in thousands of Korean won)</i>	2016				
	Current assets	Non- current assets	Current liabilities	Non-current liabilities	Equity
Busan City Gas Co., Ltd.	₩ 268,595,379	₩ 572,045,651	₩ 216,732,598	₩ 79,487,998	₩ 544,420,434
Paju Energy Service Co., Ltd.	84,461,981	1,355,619,673	22,619,942	640,087,627	777,374,085
Wirye Energy Service Co., Ltd.	26,893,752	674,288,393	9,766,761	468,497,360	222,918,024
SK E&S Hong Kong Co., Ltd.	78,715,076	5,464,597	-	-	84,179,673

SK E&S Co., Ltd. and Subsidiaries

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Summarized statements of comprehensive income for each subsidiary with non-controlling interests for the years ended December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

	2017					
	Revenue		Profit (loss) for the year		Other comprehensive income (loss)	
Busan City Gas Co., Ltd.	₩	935,235,002	₩	45,014,306	₩	(3,516,273)
Paju Energy Service Co., Ltd.		907,049,941		106,754,217		(5,636)
Wirye Energy Service Co., Ltd.		229,934,803		1,263,087		(458,195)
SK E&S Hong Kong Co., Ltd.		-		(276,063)		(7,183,747)
						(7,459,810)

(in thousands of Korean won)

	2016					
	Revenue		Profit (loss) for the year		Other comprehensive income (loss)	
Busan City Gas Co., Ltd.	₩	886,881,771	₩	49,691,196	₩	(372,041)
Paju Energy Service Co., Ltd.		-		(6,110,920)		(45,672)
Wirye Energy Service Co., Ltd.		8,619,953		(7,372,633)		24,643
SK E&S Hong Kong Co., Ltd.		-		47,615,662		6,816,072
						54,431,734

Summarized statements of cash flows for each subsidiary with non-controlling interests for the years ended December 31, 2017 and 2016, are as follows:

(in thousands of Korean won)

	2017					
	Operating activities		Investing activities		Financing activities	
Busan City Gas Co., Ltd.	₩	55,659,686	₩	(11,043,560)	₩	(5,000,500)
Paju Energy Service Co., Ltd.		64,938,067		(230,971,368)		174,154,975
Wirye Energy Service Co., Ltd.		(17,811,216)		(157,201,915)		180,000,000
SK E&S Hong Kong Co., Ltd.		(7,359,135)		-		-
						59,065,466

(in thousands of Korean won)

	2016					
	Operating activities		Investing activities		Financing activities	
Busan City Gas Co., Ltd.	₩	46,158,621	₩	(36,125,482)	₩	(5,000,500)
Paju Energy Service Co., Ltd.		(38,553,777)		(201,206,483)		209,483,353
Wirye Energy Service Co., Ltd.		(17,811,216)		(157,201,915)		180,000,000
SK E&S Hong Kong Co., Ltd.		12,088,993		46,682,923		-
						293,550

SK E&S Co., Ltd. and Subsidiaries

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34. Related Party Transactions

The Controlling Company and subsidiaries as at December 31, 2017 and 2016, are as follows:

		Percentage of ownership	
		2017	2016
Controlling Company	SK Holdings Co., Ltd.	90.0%	100.0%
Subsidiaries	Gangwon City Gas Co., Ltd.	100.0%	100.0%
	Yeongnam Energy Service Co., Ltd.	100.0%	100.0%
	Ko-one Energy Service Co., Ltd.	100.0%	100.0%
	Busan City Gas Co., Ltd. ²	67.3%	67.3%
	Jeonbuk Energy Service Co., Ltd.	100.0%	100.0%
	Jeonnam City Gas Co., Ltd.	100.0%	100.0%
	Chungcheong Energy Service Co., Ltd.	100.0%	100.0%
	Paju Energy Service Co., Ltd.	100.0%	100.0%
	Wirye Energy Service Co., Ltd.	95.2%	95.2%
	Narae Energy Service Co., Ltd.	100.0%	100.0%
	SK E&S Hong Kong Co., Ltd.	87.0%	83.7%
	Prism Energy International Pte., Ltd. (formerly, SK LNG Trading Pte., Ltd.)	100.0%	100.0%
	SK E&S Australia Pty Ltd.	100.0%	100.0%
	SK E&S Americas, Inc.	100.0%	100.0%
	PT SK E&S Nusantara	100.0%	100.0%
	SK E&S LNG, LLC	100.0%	100.0%
	DewBlaine Energy, LLC	100.0%	100.0%
	CAILIP Gas Marketing, LLC	100.0%	100.0%
	Fajar Energy International Pte., Ltd. ¹	100.0%	100.0%

¹ Prism Energy International Pte., Ltd., a subsidiary, has 100% ownership.

² The percentage of ownership did not consider treasury stock held by Busan City Gas.

SK E&S Co., Ltd. and Subsidiaries

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Details of joint ventures, associates and other related parties that have sales and other transactions with the Group or have receivables and payables balances as at December 31, 2017 and 2016, are as follows:

	Related Parties		Relationship
	2017	2016	
Joint ventures	Boryeong LNG Terminal Co., Ltd. China Gas-SK E&S LNG Trading Ltd.	Boryeong LNG Terminal Co., Ltd. China Gas-SK E&S LNG Trading Ltd.	
Associates	China Gas Holdings Ltd. Shinan Green Energy - -	China Gas Holdings Ltd. Shinan Green Energy Gemini Partners Pte., Ltd. Busan Green Energy	
Other related parties	SK Innovation Co., Ltd. SK Telecom Co., Ltd. SK Broadband Co., Ltd. SK Networks Co., Ltd. SK Telink, Corp. SK Pinx Co., Ltd. SK M&Service Co., Ltd. SK Engineering & Construction Co., Ltd. SK Infosec Co., Ltd. HAPPYNARAE Co., Ltd. Konan Technology Inc. SK Energy Co., Ltd. SK Planet Co., Ltd. SKC Co., Ltd. SK Shipping Co., Ltd. SK Hynix Inc. SK Biopharmaceuticals Co., Ltd. SK Chemicals Co., Ltd. F&U Credit Information Co.,Ltd. SKC-KOLON PI Co.,Ltd. Netruck Corporation SK Gas Co., Ltd. SK Networks Service Co.,Ltd. SK SECURITIES Co.,Ltd. SK Forest Co., Ltd. PS&Marketing Corporation SK Magic Co., Ltd. NSOK Co.,Ltd. SK bioland Co.,Ltd. SK Siltron Co., Ltd. SK hystec.inc SKW Co., Ltd. SK China Co., Ltd. -	SK Innovation Co., Ltd. SK Telecom Co., Ltd. SK Broadband Co., Ltd. SK Networks Co., Ltd. SK Telink, Corp. SK Pinx Co., Ltd. SK M&Service Co., Ltd. SK Engineering & Construction Co., Ltd. SK Infosec Co., Ltd. HAPPYNARAE Co., Ltd. Konan Technology Inc. SK Energy Co., Ltd. SK Planet Co., Ltd. SKC Co., Ltd. SK Shipping Co., Ltd. SK Hynix Inc. SK Biopharmaceuticals Co., Ltd. SK Chemicals Co., Ltd. F&U Credit Information Co.,Ltd. SKC-KOLON PI Co.,Ltd. Netruck Corporation SK Gas Co., Ltd. SK Networks Service Co.,Ltd. SK SECURITIES Co.,Ltd. SK Forest Co., Ltd. - - - - - - - SK USA, Inc.	SK Holdings Co., Ltd.'s subsidiary SK Holdings Co., Ltd.'s subsidiary SK Telecom Co., Ltd.'s subsidiary SK Holdings Co., Ltd.'s subsidiary SK Telecom Co., Ltd.'s subsidiary SK Networks Company Limited. 's subsidiary SK Planet Co., Ltd.'s subsidiary SK Holdings Co., Ltd.'s subsidiary SK Holdings Co., Ltd.'s subsidiary SK Holdings Co., Ltd.'s subsidiary SK Communications Co., Ltd.'s associate SK Innovation Co., Ltd.'s subsidiary SK Telecom Co., Ltd.'s subsidiary SK Holdings Co., Ltd.'s subsidiary SK Holdings Co., Ltd.'s subsidiary SK Telecom Co., Ltd.'s associate SK Holdings Co., Ltd.'s subsidiary The largest shareholder is a relative of SK's key management personnel SK Telecom Co., Ltd.'s subsidiary SKC Co., Ltd. 's subsidiary SK Energy Co. Ltd.'s subsidiary SK Chemicals Co., Ltd. 's subsidiary SK Networks Company Limited.'s subsidiary The largest shareholder is SK Holdings Co., Ltd SK Holdings Co., Ltd.'s subsidiary SK Telecom Co., Ltd.'s subsidiary SK Networks Company Limited.'s subsidiary SK Telink.'s subsidiary SKC Co., Ltd.'s associate SK Holdings Co., Ltd.'s subsidiary SK Hynix Inc.'s subsidiary SKC Co., Ltd.'s subsidiary The largest shareholder is SK Holdings Co., Ltd SK Innovation Co., Ltd.'s subsidiary

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-	SK Networks Internet Co., Ltd.	SK Networks Company Limited. 's subsidiary
-	SK Sm Co., Ltd.	SK Shipping Co., Ltd.'s subsidiary
-	BiZEN Co., Ltd	SK Holdings Co., Ltd.'s subsidiary
-	SK Lubricants Co., Ltd.	SK Innovation Co., Ltd.'s subsidiary
-	Korea Pipeline Corporation	SK Innovation Co., Ltd.'s subsidiary
-	SK D&D Co., Ltd.	SK Engineering & Construction Co., Ltd' associate
-	SK Networks Service	SK Networks Company Limited. 's subsidiary

SK E&S Co., Ltd. and Subsidiaries

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Sales and purchases with related parties for the years ended December 31, 2017 and 2016, are as follows:

	2017		
	Sales and others	Purchase and others	Acquisition of tangible and intangible assets
<i>(in thousands of Korean won)</i>			
Controlling company			
SK Holdings Co., Ltd.	₩ 200,215	₩ 18,275,314	₩ 1,364,230
Joint venture			
Boryeong LNG Terminal Co., Ltd.	127,700	95,001,437	-
Associates			
Shinan Green Energy	-	1,234,815	-
Other related parties			
SK Innovation Co., Ltd.	9,394,767	7,342,189	-
SK Networks Company Limited	99,368	4,532,597	819
SK Engineering & Construction Co., Ltd.	616,932	-	166,221,503
SK hynix Inc.	15,747,733	10,000	-
SKC Co., Ltd.	6,054,846	30,000	-
M&Service Co., Ltd.	-	5,471,958	-
SK Energy Co., Ltd.	37,838,412	273,149	-
SK Siltron Co., Ltd.	983,247	-	-
SK China Co., Ltd.	-	2,333,078	-
SK Telecom Co., Ltd. and others	2,569,432	8,181,281	594,411
	₩ 73,632,652	₩ 142,685,818	₩ 168,180,963

	2016		
	Sales and others	Purchase and others	Acquisition of tangible and intangible assets
<i>(in thousands of Korean won)</i>			
Controlling company			
SK Holdings Co., Ltd.	₩ 101,193	₩ 20,431,586	₩ 1,237,259
Joint venture			
Boryeong LNG Terminal Co., Ltd.	760,461	-	-
Associates			
Shinan Green Energy	-	-	-
Other related parties			
SK Innovation Co., Ltd.	7,893,092	5,733,608	-
SK Networks Company Limited	148,160	4,991,786	56,659
SK Engineering & Construction Co., Ltd.	403,491	140,000	269,803,569
SK hynix Inc.	16,381,600	10,000	-

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SKC Co., Ltd.	6,474,415	-	-
M&Service Co., Ltd.	-	6,231,168	-
SK Energy Co., Ltd.	30,218,298	192,635	-
SK China Co., Ltd.	-	1,396,442	-
SK Telecom Co., Ltd. and others	2,824,894	7,564,283	614,118
	<u>₩ 65,205,604</u>	<u>₩ 46,691,508</u>	<u>₩ 271,711,605</u>

SK E&S Co., Ltd. and Subsidiaries
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Details of receivables and payables with related parties as at December 31, 2017 and 2016, are as follows:

(in thousands of
Korean won)

	2017				2016			
	Trade receivables	Other receivables	Trade payables	Other liabilities	Trade receivables	Other receivables	Trade payables	Other liabilities
Controlling company								
SK Holdings Co., Ltd.	₩ 3,262	₩ 126	₩ -	₩ 2,153,655	₩ 4,253	₩ 126	₩ -	₩ 2,189,566
Joint venture								
Boryeong LNG Terminal Co., Ltd.	-	5,104,345	-	-	-	134,113	-	-
Other related parties								
SK Innovation Co., Ltd.	1,047,431	764,480	-	230,488	793,439	-	-	206,583
SK Networks Company Limited	8,022	160,082	-	1,090,483	11,102	160,117	-	1,045,133
SK Engineering & Construction Co., Ltd.	26,619	15,660,199	-	57,059,660	37,403	14,557	-	9,485,394
M&SERVICE Co., Ltd.	-	-	-	483,348	-	-	-	579,285
SK hynix Inc.	2,561,227	855	-	11,000	2,137,532	855	-	-
SKC Co., Ltd.	339,553	-	-	-	278,196	-	-	-
SK Shipping Co., Ltd.	-	19,156,428	-	-	-	21,615,847	-	-
SK Energy Co. Ltd.	5,335,407	764	-	-	4,309,730	685	-	386
SK Siltron Co., Ltd.	511,126	-	-	-	-	-	-	-
SK China Co., Ltd.	-	-	-	2,261,445	-	-	-	1,293,954
SK Telecom Co., Ltd. and other companies	255,058	48,715	4,897	779,627	2,201	24,425	215	1,102,549
	<u>₩ 10,087,705</u>	<u>₩ 40,895,994</u>	<u>₩ 4,897</u>	<u>₩ 64,069,706</u>	<u>₩ 7,573,856</u>	<u>₩ 21,950,725</u>	<u>₩ 215</u>	<u>₩ 15,902,850</u>

SK E&S Co., Ltd. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2017 and 2016

Major transactions between the Company and its related parties for the years ended December 31, 2017 and 2016 are as follows

2017

(in thousands of Korean won)

Related parties	Company name	Dividend income		capital decrease	
Associates	China Gas Holdings Ltd.	₩	28,110,949	₩	-
	Busan Green Energy				9,159,900

2016

(in thousands of Korean won)

Related parties	Company name	Dividend income		Equity contributions in cash	
Joint venture	Boryeong LNG Terminal Co., Ltd.	₩	-	₩	10,000,000
Associates	China Gas Holdings Ltd.		21,958,500		-
	Shinan Green Energy				2,142,344
	Total	₩	21,958,500	₩	12,142,344

During 2016, the Group transferred all of its shares and preferred stock options of the Group's affiliates, Wuhan Zhonglan SK Group Co., Ltd. and China Gas-SK E & S HK Co., Ltd. to a subsidiary of China Gas Holdings Ltd. China Gas Holdings Ltd. is also one of the Group's affiliates. The shares and preferred stock options were transferred at CNY280 million and CNY54 million, respectively, and the Group recognized equity method gain of ₩ 37,490 million and other income of ₩9,426 million.

As at December 31, 2016, SK Securities acquired a total of ₩ 120,000,000 thousand from the issuance of bonds by the Company

Compensation for key management of the Controlling Company for the years ended December 31, 2017 and 2016, consists of:

(In thousands of Korean won)

	2017		2016	
Salaries	₩	3,416,418	₩	2,866,947
Post-employment benefits		2,450,353		752,979
Share-based compensation		149,041		-
	₩	6,015,812	₩	3,619,926

Key management includes executive directors, members of the board of directors.

35. Segment Information

The Group has determined the operating segments based on the information reviewed by the Group's chief operating decision maker. For the purposes of allocating resources and assessing performance, chief operating decision maker reviews the information based on segment profit before income tax.

The Group's operating segments consist of the power generation, LNG, city gas and other segments as at December 31, 2017.

SK E&S Co., Ltd. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2017 and 2016

The segment information for the years ended December 31, 2017 and 2016, is presented after considering the distribution of intra-company transactions, adjustments of depreciation cost, interest income, interest expense and profit before tax. Assets and liabilities of each operating segment are excluded as such information is not provided regularly to the chief operating decision maker.

The following table presents segment profit (loss) for the years ended December 31, 2017 and 2016:

(in thousands of Korean

won)

		2017					
		<u>Power generation</u>	<u>LNG</u>	<u>City gas</u>	<u>Other segments</u>	<u>Adjustment for consolidation</u>	<u>Total</u>
Total segment revenue	₩	2,001,511,013	₩ 1,382,476,465	₩ 3,449,479,159	₩ -	(1,298,240,522)	₩ 5,535,226,115
Inter-segment revenue		-	(1,298,240,522)	-	-	1,298,240,522	-
Net-segment revenue		2,001,511,013	84,235,943	3,449,479,159	-	-	5,535,226,115
Segment profit before income tax		49,108,835	211,146,491	159,880,444	44,094,016	-	464,229,786

(in thousands of Korean

won)

		2016					
		<u>Power generation</u>	<u>LNG</u>	<u>City gas</u>	<u>Other segments</u>	<u>Adjustment for consolidation</u>	<u>Total</u>
Total segment revenue	₩	748,319,513	₩ 476,672,598	₩ 3,245,190,586	₩ -	(425,419,726)	₩ 4,044,762,971
Inter-segment revenue		-	(425,419,726)	-	-	425,419,726	-
Net-segment revenue		748,319,513	51,252,872	3,245,190,586	-	-	4,044,762,971
Segment profit(loss) before income tax		(36,493,915)	117,628,547	132,375,103	40,226,175	-	253,735,910

Breakdown of the Group's revenue from all services for the years ended December 31, 2017 and 2016, follows:

(In thousands of Korean won)

	2017	2016
Finished Goods	₩ 2,082,435,830	₩ 777,985,956
Trading	3,426,233,774	3,241,914,649
Others	19,461,691	17,802,151
Rental	7,094,820	7,060,215
	<u>₩ 5,535,226,115</u>	<u>₩ 4,044,762,971</u>

Revenues of ₩ 1,955,688,492 thousand (2016: ₩ 724,246,577thousand), which are more than 10% of the Group's revenue in 2017, are derived from Korea Power Exchange, and these revenues are attributable to the power generation segments.