

POSCO
and Subsidiaries
Consolidated Financial Statements
December 31, 2017 and 2016

(With Independent Auditors' Report Thereon)

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Independent Auditors' Report

Based on a report originally issued in Korean

The Board of Directors and Shareholders
POSCO:

We have audited the accompanying consolidated financial statements of POSCO and its subsidiaries ("the Company"), which comprise the consolidated statements of financial position as of December 31, 2017 and 2016, the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these 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 our 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, we consider 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 consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2017 and 2016, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

Emphasis of matter

Without qualifying our opinion, we draw attention to the following key audit matters with regard to production-to-order transactions.

Pursuant to “Practical Guide to Korean Standards on Auditing 2016-1”, audit matters related to entities engaged in production-to-order transactions are of most significance in our audit of the consolidated financial statements, which determination is based on our professional judgment and communications with those charged with governance. These matters were addressed in the context of our audit of the consolidated financial statements as of and for the year ended December 31, 2017 as a whole, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have considered the results of audit procedures for the following key audit matters in forming our audit opinion of the consolidated financial statements.

(a) Overview

An overview of key audit matters related to the industry with production-to-order transactions described in this audit report is as follows.

Certain subsidiaries of POSCO, including POSCO ENGINEERING & CONSTRUCTION CO., LTD. and POSCO ICT, are engaged in production-to-order transactions. Sales in relation to production-to-order transactions are approximately 11% of consolidated sales for the year ended December 31, 2017. When the outcome of a construction contract can be estimated reliably, the Company recognizes contract revenues and contract costs associated with the construction contract as revenue and expenses, respectively, based on the percentage-of-completion method at the end of the reporting period. The percentage-of-completion is calculated based on the ratio of contract costs incurred for work performed to date to estimated total contract costs. The gross amount due from customers for contract work is presented for all contracts in which costs incurred plus recognized profits (less recognized losses) exceeded progress billings. The gross amount due to customers for contract work is presented for all contracts in which progress billings exceed costs incurred plus recognized profits (less recognized losses). The related accounting policies and disclosures are included in notes 3 and 29 to the consolidated financial statements.

(b) Identification of significant risks and audit procedures

We identified the significant risks through discussions with auditors of certain subsidiaries in industry with production-to-order transactions and review of their audit documentation of identified significant risks. We also reviewed their audit procedures in responding to those significant risks, which were conducted based on their professional judgments. Our procedures included the review of the subsidiary auditors' audit results, inquiries and application of analytical and other procedures on their audit results. The identified significant risks and audit procedures for the Company's production-to-order transactions included the following:

1) Revenues recognized by the input method

We identified significant risks associated with revenues recognized by the input method. The variation of estimated amounts has significant impact on profit for the year ended December 31, 2017 and future periods because of the high degree of uncertainty of estimated total contract revenues and costs is for large-scale development constructions at initial stage, and constructions with delays and possibility of being discontinued.

Audit procedures regarding revenues recognized by the input method included the following.

- Evaluation and tests of the internal controls and computerized systems over the process of determination of accounting treatments in relation to revenue recognition by the input method
- Inquiries as to significant changes and progress of the contracts as of December 31, 2017
- Inquires as to rationale and reliability of estimated result of construction contract, the type of the contracts and classification of the contracts and obtaining confirmation letters on selected transactions
- Inspection of document regarding the terms of the contract

2) Uncertainty of estimated total contract costs

Construction contracts are generally performed for long term duration, and the total contract costs are estimated based on estimated future amounts such as material costs, labor costs, outsourcing costs and others which are expected to be incurred during construction period. The actual total contract costs can vary from the Company's original estimates because of changes in condition. Total estimated contract costs changed by ₩162,372 million for the year ended December 31, 2017 (see note 29(d) to the consolidated financial statements). Considering possible impact from the uncertainty, we identified significant risks regarding uncertainty of estimated total contract costs.

Audit procedures regarding the impact of uncertainty of estimated total contract costs on the consolidated financial statements included the following.

- Evaluation and tests of the internal controls over the process of estimation of total contract costs
- Analytical review of the components of the total contract costs of major projects
- Inquiries to person in charge of construction field regarding rationale and reliability of the estimated result of total construction contract for major projects
- Inquiries and inspection of documents as to the cause of the changes for major projects in which significant changes in estimated total contract costs were made
- Inquiries and inspection of documents as to the cause of significant differences between estimated total cost ratio and the actual total cost ratio for completed projects

3) Assessment of the percentage-of-completion

Changes in the percentage-of-completion have significant impact on current and future profit of construction contract and may result in misstatement of profit or loss of construction contract. We identified significant risks regarding assessment of the percentage-of-completion as uncertainty of the percentage-of-completion has significant impact on profit or loss of construction contract in case the Company fails to estimate the percentage-of-completion reliably.

Audit procedures regarding total contract costs and cumulative incurred contract costs in assessing of the percentage-of-completion included in following.

- Evaluation and tests of the internal controls over the estimation of percentage of completion
- For selected samples from contract costs incurred during the year ended December 31, 2017, inspection of documentation on existence and timing of occurrence, and performance of cut-off test
- Recalculation of percentage-of-completion for major construction projects
- Inquiries as to the reasonableness of cumulative incurred contract costs and the progress rate
- Analytical review of major projects to see if there was a significant difference between the progress and the percentage of completion according to the input method as of December 31, 2017 and evaluation of the reasonableness of such difference by document inspection
- Inquiries and inspection of documents as to the cause of lower percentage of completion as compared to the timeline of project

4) Recoverability of due from customers for contract work

As of December 31, 2017 and 2016, the amounts of due from customers for contract work are ₩850,301 million and ₩964,304 million, or 9% and 10% of consolidated trade accounts and note receivable (see note 29(b) to the consolidated financial statements) as of the respective reporting dates. We identified significant risks regarding the recoverability of due from customers for contract work as the amounts of due from customers for contract work are significant.

Audit procedures regarding the recoverability of due from customers for contract work included the following.

- Evaluation and tests of the internal controls over the process to assess recoverability of due from customers and measure impairment of related receivables
- Inquiries and inspection of documents to identify a project which has a significantly abnormal balance of due from customers compared to payment condition and condition of billing terms
- Assess the reasonableness of the basis for the evaluation of the possibility of the recovery of the amount related to the due from customers
- Inquiries and obtaining other related information on a sample basis to evaluate the credit risk of customer
- Assess the reasonableness of recoverability of due from customer of which balance has not changed for an extended period of time

5) Accounting for the variation of construction contract

Variation of construction contracts occurred during the year ended December 31, 2017 and had significant impact on profits or loss of the construction contract (see note 29(d) to the consolidated financial statements). We identified significant risks regarding the accounting for the variation of construction contract, including disclosures.

Audit procedures regarding accounting of the variation of construction contract and disclosures included the following.

- Evaluation and tests of the internal controls over risks associated with measurement and change the total contract revenue for each project
- For selected samples on contracts with changes, inspection of document and evaluation of appropriateness of the basis used for the calculating total contract revenue
- Inquiries and inspection of documents related to the causes of change when the contracted revenue significantly changed through the construction work change other than the initially agreed upon contracted amount
- Assess whether additional contract costs according to changes in construction work were reflected in the estimated total contract costs and percentage of completion
- Assess the contract information of major projects such as initially agreed upon contracted amount and others and inquiries to the person in charge of construction field

Other Matter

The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries. Accordingly, this report and the accompanying consolidated financial statements are for use by those knowledgeable about Korean auditing standards and their application in practice.

KPMG Samjong Accounting Corp.

Seoul, Korea
February 28, 2018

This report is effective as of February 28, 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 the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

POSCO and Subsidiaries
Consolidated Statements of Financial Position
As of December 31, 2017 and 2016

(in millions of Won)

	<u>Notes</u>	<u>December 31, 2017</u>	<u>December 31, 2016</u>
Assets			
Cash and cash equivalents	4,5,23	₩ 2,612,530	2,447,619
Trade accounts and notes receivable, net	6,17,23,29,37	8,950,548	9,786,927
Other receivables, net	7,23,37	1,636,006	1,539,742
Other short-term financial assets	8,23	7,045,880	5,224,911
Inventories	9	9,950,955	9,051,721
Current income tax assets	35	38,489	46,473
Assets held for sale	10	71,768	311,958
Other current assets	16	<u>821,242</u>	<u>894,484</u>
Total current assets		<u>31,127,418</u>	<u>29,303,835</u>
Long-term trade accounts and notes receivable, net	6,23	731,570	51,124
Other receivables, net	7,23,37	879,176	762,912
Other long-term financial assets	8,23	1,911,684	2,657,692
Investments in associates and joint ventures	11	3,557,932	3,882,389
Investment property, net	13	1,064,914	1,117,720
Property, plant and equipment, net	14	31,883,535	33,770,339
Intangible assets, net	15	5,952,269	6,088,729
Defined benefit assets, net	21	8,224	83,702
Deferred tax assets	35	1,419,226	1,476,873
Other non-current assets	16	<u>489,011</u>	<u>567,680</u>
Total non-current assets		<u>47,897,541</u>	<u>50,459,160</u>
Total assets		<u>₩ 79,024,959</u>	<u>79,762,995</u>

See accompanying notes to the consolidated financial statements.

POSCO and Subsidiaries
Consolidated Statements of Financial Position, Continued
As of December 31, 2017 and 2016

(in millions of Won)

	<u>Notes</u>	<u>December 31, 2017</u>	<u>December 31, 2016</u>
Liabilities			
Trade accounts and notes payable	23,37	₩ 3,465,146	4,073,286
Short-term borrowings and current installments of long-term borrowings	4,17,23	11,274,516	10,194,807
Other payables	18,23	1,753,461	1,851,659
Other short-term financial liabilities	19,23,37	129,812	149,748
Current income tax liabilities	35	515,538	446,071
Provisions	20	110,946	114,865
Other current liabilities	22,29	<u>1,696,597</u>	<u>2,084,961</u>
Total current liabilities		<u>18,946,016</u>	<u>18,915,397</u>
Long-term trade accounts and notes payable	23,37	12,532	44,512
Long-term borrowings, excluding current installments	4,17,23	9,789,141	12,510,191
Other payables	18,23	147,750	208,559
Other long-term financial liabilities	19,23	114,105	81,309
Defined benefit liabilities, net	21	137,193	123,604
Deferred tax liabilities	35	1,904,242	1,642,939
Long-term provisions	20	477,172	337,739
Other non-current liabilities	22	<u>32,800</u>	<u>60,351</u>
Total non-current liabilities		<u>12,614,935</u>	<u>15,009,204</u>
Total liabilities		<u>31,560,951</u>	<u>33,924,601</u>
Equity			
Share capital	24	482,403	482,403
Capital surplus	24	1,412,565	1,397,791
Hybrid bonds	25	996,919	996,919
Reserves	26	(682,556)	(143,985)
Treasury shares	27	(1,533,054)	(1,533,468)
Retained earnings		<u>43,056,600</u>	<u>41,173,778</u>
Equity attributable to owners of the controlling company		43,732,877	42,373,438
Non-controlling interests	25	<u>3,731,131</u>	<u>3,464,956</u>
Total equity		<u>47,464,008</u>	<u>45,838,394</u>
Total liabilities and equity		<u>₩ 79,024,959</u>	<u>79,762,995</u>

See accompanying notes to the consolidated financial statements.

POSCO and Subsidiaries
Consolidated Statements of Comprehensive Income
For the years ended December 31, 2017 and 2016

(in millions of Won, except per share information)

	Notes	2017	2016
Revenue	28,29,37	₩ 60,655,100	53,083,513
Cost of sales	29,31,34,37	(52,299,189)	(46,393,962)
Gross profit		8,355,911	6,689,551
Selling and administrative expenses	30,34		
Administrative expenses	31	(2,176,800)	(2,291,540)
Selling expenses		(1,557,277)	(1,553,686)
Operating profit		4,621,834	2,844,325
Share of profit (loss) of equity-accounted investees, net	11	10,540	(88,677)
Finance income and costs	23,32		
Finance income		2,372,667	2,231,980
Finance costs		(2,484,277)	(3,014,190)
Other non-operating income and expenses	33,37		
Other non-operating income		451,224	215,136
Other non-operating expenses	34	(792,296)	(755,720)
Profit before income tax		4,179,692	1,432,854
Income tax expense	35	(1,206,223)	(384,685)
Profit		2,973,469	1,048,169
Other comprehensive income (loss)			
Items that will not be reclassified subsequently to profit or loss:			
Remeasurements of defined benefit plans, net of tax	21	(47,543)	20,540
Items that are or may be reclassified subsequently to profit or loss:			
Capital adjustment arising from investments in equity-accounted investees		(217,388)	134,590
Net changes in unrealized fair value of available-for-sale investments, net of tax	23	(31,389)	310,608
Foreign currency translation differences, net of tax		(264,695)	(11,491)
Gain or losses on valuation of derivatives, net of tax	23	(143)	-
Other comprehensive income (loss), net of tax		(561,158)	454,247
Total comprehensive income		₩ 2,412,311	1,502,416
Profit attributable to:			
Owners of the controlling company		₩ 2,790,106	1,363,310
Non-controlling interests		183,363	(315,141)
Profit		₩ 2,973,469	1,048,169
Total comprehensive income attributable to:			
Owners of the controlling company		₩ 2,218,278	1,822,533
Non-controlling interests		194,033	(320,117)
Total comprehensive income		₩ 2,412,311	1,502,416
Basic and diluted earnings per share (in Won)	36	34,464	16,627

See accompanying notes to the consolidated financial statements.

POSCO and Subsidiaries
Consolidated Statements of Changes in Equity
For the years ended December 31, 2017 and 2016

(in millions of Won)

	Attributable to owners of the controlling company						Sub total	Non-controlling interests	Total
	Share capital	Capital surplus	Hybrid bonds	Reserves	Treasury shares	Retained earnings			
Balance as of January 1, 2016	₩ 482,403	1,383,623	996,919	(594,756)	(1,533,898)	40,501,059	41,235,350	3,834,872	45,070,222
Comprehensive income:									
Profit	-	-	-	-	-	1,363,310	1,363,310	(315,141)	1,048,169
Other comprehensive income (loss)									
Remeasurements of defined benefit plans, net of tax	-	-	-	-	-	9,787	9,787	10,753	20,540
Capital adjustment arising from investments in equity-accounted investees, net of tax	-	-	-	124,626	-	-	124,626	9,964	134,590
Net changes in the unrealized fair value of available-for-sale investments, net of tax	-	-	-	314,428	-	-	314,428	(3,820)	310,608
Foreign currency translation differences, net of tax	-	-	-	10,382	-	-	10,382	(21,873)	(11,491)
Total comprehensive income	-	-	-	449,436	-	1,373,097	1,822,533	(320,117)	1,502,416
Transactions with owners of the controlling company, recognized directly in equity :									
Year-end dividends	-	-	-	-	-	(479,974)	(479,974)	(50,333)	(530,307)
Interim dividends	-	-	-	-	-	(179,992)	(179,992)	-	(179,992)
Changes in subsidiaries	-	-	-	-	-	-	-	49,250	49,250
Changes in ownership interests in subsidiaries	-	8,650	-	-	-	-	8,650	(16,544)	(7,894)
Interest of hybrid bonds	-	-	-	-	-	(43,832)	(43,832)	(24,253)	(68,085)
Disposal of treasury shares	-	32	-	-	430	-	462	-	462
Others	-	5,486	-	1,335	-	3,420	10,241	(7,919)	2,322
Total transactions with owners of the controlling company	-	14,168	-	1,335	430	(700,378)	(684,445)	(49,799)	(734,244)
Balance as of December 31, 2016	₩ 482,403	1,397,791	996,919	(143,985)	(1,533,468)	41,173,778	42,373,438	3,464,956	45,838,394

See accompanying notes to the consolidated financial statements.

POSCO and Subsidiaries
Consolidated Statements of Changes in Equity, Continued
For the years ended December 31, 2017 and 2016

(in millions of Won)

	Attributable to owners of the controlling company						Non-controlling interests	Total	
	Share capital	Capital surplus	Hybrid bonds	Reserves	Treasury shares	Retained earnings			Sub total
Balance as of January 1, 2017	₩ 482,403	1,397,791	996,919	(143,985)	(1,533,468)	41,173,778	42,373,438	3,464,956	45,838,394
Comprehensive income:									
Profit	-	-	-	-	-	2,790,106	2,790,106	183,363	2,973,469
Other comprehensive income (loss)									
Remeasurements of defined benefit plans, net of tax	-	-	-	-	-	(38,043)	(38,043)	(9,500)	(47,543)
Capital adjustment arising from investments in equity-accounted investees, net of tax	-	-	-	(214,794)	-	-	(214,794)	(2,594)	(217,388)
Net changes in the unrealized fair value of available-for-sale investments, net of tax	-	-	-	(45,953)	-	-	(45,953)	14,564	(31,389)
Foreign currency translation differences, net of tax	-	-	-	(272,902)	-	-	(272,902)	8,207	(264,695)
Gain or losses on valuation of derivatives, net of tax	-	-	-	(136)	-	-	(136)	(7)	(143)
Total comprehensive income	-	-	-	(533,785)	-	2,752,063	2,218,278	194,033	2,412,311
Transactions with owners of the controlling company, recognized directly in equity :									
Year-end dividends	-	-	-	-	-	(459,987)	(459,987)	(42,909)	(502,896)
Interim dividends	-	-	-	-	-	(359,993)	(359,993)	-	(359,993)
Changes in subsidiaries	-	-	-	-	-	-	-	(7,151)	(7,151)
Changes in ownership interests in subsidiaries	-	16,287	-	-	-	-	16,287	147,420	163,707
Interest of hybrid bonds	-	-	-	-	-	(43,600)	(43,600)	(24,187)	(67,787)
Disposal of treasury shares	-	126	-	-	414	-	540	-	540
Others	-	(1,639)	-	(4,786)	-	(5,661)	(12,086)	(1,031)	(13,117)
Total transactions with owners of the controlling company	-	14,774	-	(4,786)	414	(869,241)	(858,839)	72,142	(786,697)
Balance as of December 31, 2017	₩ 482,403	1,412,565	996,919	(682,556)	(1,533,054)	43,056,600	43,732,877	3,731,131	47,464,008

See accompanying notes to the consolidated financial statements.

POSCO and Subsidiaries
Consolidated Statements of Cash Flows
For the years ended December 31, 2017 and 2016

<i>(in millions of Won)</i>	Notes	2017	2016
Cash flows from operating activities			
Profit	₩	2,973,469	1,048,169
Adjustments for:			
Depreciation		2,887,646	2,835,843
Amortization		409,774	378,004
Finance income		(1,376,324)	(882,905)
Finance costs		1,440,282	1,501,953
Income tax expense		1,206,223	384,685
Impairment losses on property, plant and equipment		117,231	196,882
Gain on disposal of property, plant and equipment		(32,145)	(23,826)
Loss on disposal of property, plant and equipment		151,343	86,622
Impairment losses on goodwill and intangible assets		167,995	127,875
Gain on disposal of investments			
in subsidiaries, associates and joint ventures		(81,794)	(23,305)
Loss on disposal of investments			
in subsidiaries, associates and joint ventures		19,985	22,499
Share of loss (profit) of equity-accounted investees		(10,540)	88,677
Impairment losses on assets held for sale		-	24,890
Gain on disposal of assets held for sale		(1,180)	(23,112)
Expenses related to post-employment benefits		199,926	333,139
Bad debt expenses		271,871	202,717
Loss on valuation of inventories		78,560	152,249
Increase to provisions		215,383	189,914
Others, net		(32,484)	8,133
		<u>5,631,752</u>	<u>5,580,934</u>
Changes in operating assets and liabilities	39	(1,926,274)	(425,815)
Interest received		244,980	206,839
Interest paid		(735,735)	(691,264)
Dividends received		225,514	152,559
Income taxes paid		(806,396)	(602,004)
Net cash provided by operating activities	₩	<u>5,607,310</u>	<u>5,269,418</u>

See accompanying notes to the consolidated financial statements.

POSCO and Subsidiaries
Consolidated Statements of Cash Flows, Continued
For the years ended December 31, 2017 and 2016

<i>(in millions of Won)</i>	<u>Notes</u>	<u>2017</u>	<u>2016</u>
Cash flows from investing activities			
Acquisitions of short-term financial instruments	₩	(20,843,530)	(18,578,809)
Proceeds from disposal of short-term financial instruments		19,146,634	17,177,409
Increase in loans		(1,055,895)	(603,332)
Collection of loans		667,045	557,064
Acquisitions of available-for-sale investments		(66,278)	(328,151)
Proceeds from disposal of available-for-sale investments		1,006,856	280,066
Acquisitions of investment in associates and joint ventures		(60,277)	(173,769)
Proceeds from disposal of investment in associates and joint ventures		74,881	7,914
Acquisitions of investment property		(69,169)	(45,735)
Proceeds from disposal of investment property		5,771	11,624
Acquisitions of property, plant and equipment		(2,287,580)	(2,324,112)
Proceeds from disposal of property, plant and equipment		39,183	44,330
Acquisitions of intangible assets		(343,423)	(138,181)
Proceeds from disposal of intangible assets		28,502	8,672
Proceeds from disposal of assets held for sale		203,958	305,813
Increase in cash (payment for) acquisition of business, net of cash acquired		(174,165)	4,503
Cash received (decrease in cash) from disposal of business, net of cash transferred		(53,008)	21,223
Others, net		(37,379)	18,844
Net cash used in investing activities		<u>(3,817,874)</u>	<u>(3,754,627)</u>
Cash flows from financing activities			
Proceeds from borrowings		1,725,983	1,988,665
Repayment of borrowings		(3,136,016)	(4,274,895)
Proceeds from (repayment of) short-term borrowings, net		558,083	(885,861)
Capital contribution from non-controlling interests		266,219	24,704
Payment of cash dividends		(863,450)	(708,970)
Payment of interest of hybrid bonds		(67,783)	(68,097)
Others, net		(48,564)	(26,513)
Net cash used in financing activities	39	<u>(1,565,528)</u>	<u>(3,950,967)</u>
Effect of exchange rate fluctuation		<u>(58,997)</u>	<u>12,611</u>
Net increase (decrease) in cash and cash equivalents		164,911	(2,423,565)
Cash and cash equivalents at beginning of the year	5	<u>2,447,619</u>	<u>4,871,184</u>
Cash and cash equivalents at end of the year	5	<u>₩ 2,612,530</u>	<u>2,447,619</u>

See accompanying notes to the consolidated financial statements.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements
As of December 31, 2017

1. General Information

General information about POSCO, its 40 domestic subsidiaries including POSCO ENGINEERING & CONSTRUCTION CO., LTD., 139 foreign subsidiaries including POSCO America Corporation (collectively "the Company") and its 111 associates and joint ventures are as follows:

(a) The controlling company

POSCO, the controlling company, was incorporated on April 1, 1968, under the Commercial Code of the Republic of Korea to manufacture and sell steel rolled products and plates in the domestic and foreign markets.

The shares of POSCO have been listed on the Korea Exchange on June 10, 1988. POSCO owns and operates two steel plants (Pohang and Gwangyang) and one office in Korea and it also operates internationally through six of its overseas liaison offices.

As of December 31, 2017, POSCO's shareholders are as follows:

Shareholder's name	Number of shares	Ownership (%)
National Pension Service	9,660,885	11.08
Nippon Steel & Sumitomo Metal Corporation(*1)	2,894,712	3.32
BlackRock Institutional Trust Company, N.A.(*1)	2,483,875	2.85
Government of Singapore Investment Corp Private Limited	1,934,312	2.22
KB Financial Group Inc. and subsidiaries(*2)	1,919,361	2.20
Others	68,293,690	78.33
	87,186,835	100.00

(*1) Includes American Depositary Receipts (ADRs) of POSCO, each of which represents 0.25 share of POSCO's common share which has par value of ₩5,000 per share.

(*2) Includes shares held by subsidiaries pursuant to Articles of Incorporation.

As of December 31, 2017, the shares of POSCO are listed on the Korea Exchange, while its ADRs are listed on the New York Stock Exchange.

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2017

(b) Consolidated subsidiaries

Details of consolidated subsidiaries as of December 31, 2017 and 2016 are as follows:

	Principal operations	Ownership (%)						Region
		December 31, 2017			December 31, 2016			
		POSCO	Subsidiaries	Total	POSCO	Subsidiaries	Total	
[Domestic]								
POSCO ENGINEERING & CONSTRUCTION, CO., LTD.	Engineering and construction	52.80	-	52.80	52.80	-	52.80	Pohang
POSCO Processing&Service	Steel sales and trading	93.95	0.45	94.40	93.95	0.45	94.40	Seoul
POSCO COATED & COLOR STEEL Co., Ltd.	Coated steel manufacturing	56.87	-	56.87	56.87	-	56.87	Pohang
POSCO ICT	Computer hardware and software distribution	65.38	-	65.38	65.38	-	65.38	Pohang
POSCO Research Institute	Economic research and consulting	100.00	-	100.00	100.00	-	100.00	Seoul
POSMATE	Business facility maintenance	83.83	16.17	100.00	57.25	11.05	68.30	Seoul
POSCO A&C	Architecture and consulting	100.00	-	100.00	100.00	-	100.00	Seoul
POSCO Venture Capital Co., Ltd.	Investment in venture companies	95.00	-	95.00	95.00	-	95.00	Pohang
eNtoB Corporation	Electronic commerce	7.50	53.63	61.13	7.50	53.63	61.13	Seoul
POSCO CHEMTECH	Refractories manufacturing and sales	60.00	-	60.00	60.00	-	60.00	Pohang
POSCO-Terminal Co., Ltd.	Transporting and warehousing	51.00	-	51.00	51.00	-	51.00	Gwangyang
POSCO M-TECH	Packing materials manufacturing and sales	48.85	-	48.85	48.85	-	48.85	Pohang
POSCO ENERGY CO., LTD.	Generation of electricity	89.02	-	89.02	89.02	-	89.02	Seoul
POSCO NIPPON STEEL RHF								
JOINT VENTURE CO.,Ltd.	Steel byproduct manufacturing and sales	70.00	-	70.00	70.00	-	70.00	Pohang
MegaAsset Co.,Ltd.	Real estate rental and sales	-	100.00	100.00	-	100.00	100.00	Incheon
Future Creation Fund Postech								
Early Stage account	Investment in venture companies	-	40.00	40.00	-	40.00	40.00	Seoul
POSCO WOMAN'S FUND	Investment in venture companies	-	40.00	40.00	-	40.00	40.00	Seoul
POSPPOWER Co., Ltd.	Generation of electricity	-	100.00	100.00	-	100.00	100.00	Samcheok
SPH Co. Ltd.	House manufacturing and management	-	100.00	100.00	-	100.00	100.00	Incheon
Posco Group University	Education service and real estate business	100.00	-	100.00	100.00	-	100.00	Incheon
HOTEL LAONZENA	Hotel business	-	100.00	100.00	-	100.00	100.00	Daegu
Growth Ladder POSCO K-Growth Global Fund	Investment in venture companies	-	50.00	50.00	-	50.00	50.00	Pohang
2015 POSCO New technology II Fund	Investment in venture companies	-	25.00	25.00	-	25.00	25.00	Pohang
POCA STEM Co., Ltd	Stem cell medicine development	-	100.00	100.00	-	100.00	100.00	Seoul
Posco e&c Songdo International Building	Non-residential building rental	-	100.00	100.00	-	100.00	100.00	Seoul
POSCO ES MATERIALS CO., Ltd.	Secondary and storage battery manufacturing	75.32	-	75.32	75.32	-	75.32	Gumi
Poscoene	Refuse derived fuel and power generation	-	100.00	100.00	-	100.00	100.00	Seoul
POSCO Humans	Construction	90.30	-	90.30	90.30	-	90.30	Pohang
Mapo Hibroad Parking Co., Ltd.	Construction	-	71.00	71.00	-	70.99	70.99	Seoul
BLUE O&M Co.,Ltd.	Engineering service	-	100.00	100.00	-	100.00	100.00	Pohang
Busan E&E Co.,Ltd.	Refuse derived fuel and power generation	70.00	-	70.00	70.00	-	70.00	Busan
POSCO Family Strategy Fund	Investment in venture companies	69.91	30.09	100.00	69.91	30.09	100.00	Pohang
POSCO DAEWOO Corporation	Trading, energy & resource development and others	62.90	0.04	62.94	60.31	-	60.31	Seoul
Pohang Scrap Recycling Distribution Center Co.,Ltd.	Steel processing and sales	-	51.00	51.00	-	51.00	51.00	Pohang
PSC Energy Global Co., Ltd.	Investment in energy industry	-	100.00	100.00	-	100.00	100.00	Pohang
Suncheon Eco Trans Co., Ltd	Train manufacturing and management	100.00	-	100.00	100.00	-	100.00	Suncheon
POSCO Research & Technology	Intellectual Property Services and consulting	100.00	-	100.00	-	-	-	Seoul
Kyobo Securities Bond Plus 6M								
Professional Private Equity Trust W-2	Private equity trust	97.47	-	97.47	-	-	-	Seoul
Kyobo Securities Bond Plus 6M								
Professional Private Equity Trust W-5	Private equity trust	-	99.67	99.67	-	-	-	Seoul
Mirae Asset Smart Q Sigma 2.0								
Professional Private Equity Trust	Private equity trust	99.01	-	99.01	-	-	-	Seoul
IT Engineering CO. Ltd	Automotive engineering service	-	-	-	-	17.00	17.00	Seoul
POSCO Engineering CO.,Ltd	Construction and engineering service	-	-	-	-	95.56	95.56	Incheon

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2017

Principal operations	Ownership (%)						Region	
	December 31, 2017			December 31, 2016				
	POSCO	Subsidiaries	Total	POSCO	Subsidiaries	Total		
[Foreign]								
POSCO America Corporation	Steel trading	99.45	0.55	100.00	99.45	0.55	100.00	USA
POSCO AUSTRALIA PTY LTD	Raw material sales & mine development	100.00	-	100.00	100.00	-	100.00	Australia
POSCO Canada Ltd.	Coal sales	-	100.00	100.00	-	100.00	100.00	Canada
POSCO Asia Co., Ltd.	Steel and raw material trading	100.00	-	100.00	100.00	-	100.00	China
POSCO-CTPC Co., Ltd.	Steel manufacturing and sales	56.60	43.40	100.00	56.60	43.40	100.00	China
POSCO E&C Vietnam Co., Ltd.	Steel structure manufacturing and sales	-	100.00	100.00	-	100.00	100.00	Vietnam
Zhangjiagang Pohang Stainless Steel Co., Ltd.	Stainless steel manufacturing and sales	59.60	23.88	82.48	59.60	23.88	82.48	China
POSCO(Guangdong) Coated Steel Co., Ltd.	Plating steel sheet manufacturing and sales	87.04	10.04	97.08	87.04	10.04	97.08	China
POSCO (Thailand) Company Limited	Steel manufacturing and sales	88.58	11.42	100.00	85.62	14.38	100.00	Thailand
Myanmar POSCO Steel Co., Ltd.	Zinc relief manufacturing and sales	70.00	-	70.00	70.00	-	70.00	Myanmar
POSCO-MKPC SDN BHD	Steel manufacturing and sales	44.69	25.31	70.00	44.69	25.31	70.00	Malaysia
Qingdao Pohang Stainless Steel Co., Ltd.	Stainless steel manufacturing and sales	70.00	30.00	100.00	70.00	30.00	100.00	China
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	Steel manufacturing and sales	90.00	10.00	100.00	90.00	10.00	100.00	China
POSCO-China Qingdao Processing Center Co., Ltd.	Steel manufacturing and sales	-	100.00	100.00	-	100.00	100.00	China
POS-ORE PTY LTD	Iron ore sales and sales	-	100.00	100.00	-	100.00	100.00	Australia
POSCO-China Holding Corp.	Holding company	100.00	-	100.00	100.00	-	100.00	China
POSCO JAPAN Co., Ltd.	Steel trading	100.00	-	100.00	100.00	-	100.00	Japan
POS-CD PTY LTD	Coal sales	-	100.00	100.00	-	100.00	100.00	Australia
POS-GC PTY LTD	Coal sales	-	100.00	100.00	-	100.00	100.00	Australia
POSCO-India Private Limited	Steel manufacturing and sales	99.99	-	99.99	99.99	-	99.99	India
POSCO-India Pune Processing Center. Pvt. Ltd.	Steel manufacturing and sales	65.00	-	65.00	65.00	-	65.00	India
POSCO Japan PC CO.,LTD	Steel manufacturing and sales	-	86.12	86.12	-	86.12	86.12	Japan
POSCO-CFCP Co., Ltd.	Steel manufacturing and sales	39.60	60.40	100.00	39.60	60.40	100.00	China
POSCO E&C CHINA Co., Ltd.	Civil engineering and construction	-	100.00	100.00	-	100.00	100.00	China
POSCO MPPC S.A. de C.V.	Steel manufacturing and sales	21.02	75.29	96.31	-	96.00	95.00	Mexico
Zhangjiagang Pohang Port Co., Ltd.	Loading and unloading service	-	100.00	100.00	-	100.00	100.00	China
POSCO-VIETNAM Co., Ltd.	Steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	Vietnam
POSCO MEXICO S.A. DE C.V.	Automotive steel sheet manufacturing and sales	84.84	15.16	100.00	84.84	15.16	100.00	Mexico
POSCAN Elkview	Coal sales	-	100.00	100.00	-	100.00	100.00	Canada
POSCO-Poland Wncloaw Processing Center Sp. z o. o.	Steel manufacturing and sales	60.00	-	60.00	60.00	-	60.00	Poland
POS-NIP PTY LTD	Coal sales	-	100.00	100.00	-	100.00	100.00	Australia
POSCO RUS LLC	Trading and business development	90.00	10.00	100.00	90.00	10.00	100.00	Russia
POSCO DAEWOO WAIGAIQIAO	Intermediary trade & bonded warehouse operation	-	100.00	100.00	-	100.00	100.00	China
SHANGHAI CO., LTD	Forest resources development	-	85.00	85.00	-	85.00	85.00	Indonesia
PT. Bio Inti Agrindo	Forest resources development	-	85.00	85.00	-	85.00	85.00	Indonesia
POSCO ENGINEERING AND CONSTRUCTION AUSTRALIA PTY LTD	Iron ore development and sales	-	100.00	100.00	-	100.00	100.00	Australia
POSCO-TISCO (JILIN) PROCESSING CENTER Co., Ltd.	Steel manufacturing and sales	50.00	10.00	60.00	50.00	10.00	60.00	China
POSCO Thainox Public Company Limited	STS cold-rolled steel manufacturing and sales	84.88	-	84.88	84.93	-	84.93	Thailand
Hunchun Posco Hyundai Logistics	Logistics	-	80.00	80.00	-	80.00	80.00	China
POSCO DAEWOO VIETNAM CO., LTD	Trading business	-	100.00	100.00	-	100.00	100.00	Vietnam
POSCO(Chongqing) Automotive Processing Center Co., Ltd.	Steel manufacturing and sales	90.00	10.00	100.00	90.00	10.00	100.00	China
SUZHOU POSCO-CORE TECHNOLOGY CO., LTD.	Component manufacturing and sales	-	100.00	100.00	-	100.00	100.00	China
PT.Krakatau Posco Chemtech Calcination	Quicklime manufacturing and sales	-	80.00	80.00	-	80.00	80.00	Indonesia
POSCO AFRICA (PROPRIETARY) LIMITED	Mine development	100.00	-	100.00	100.00	-	100.00	South Africa
POSCO ICT BRASIL	IT service and engineering	-	100.00	100.00	-	100.00	100.00	Brazil
LA-SRDC	Scrap manufacturing	-	100.00	100.00	-	100.00	100.00	USA
DONG FANG JIN HONG	Real estate development, rental and management	-	100.00	100.00	-	100.00	100.00	China
POSCO AMERICA COMERCIALIZADORA S DE RL DE CV	Human resource service	-	100.00	100.00	-	100.00	100.00	Mexico
POSCO(Guangdong) Automotive Steel Co., Ltd.	Steel manufacturing and sales	83.64	10.00	93.64	83.64	10.00	93.64	China
POSCO-Malaysia SDN. BHD.	Steel manufacturing and sales	81.79	13.63	95.42	81.79	13.63	95.42	Malaysia
PT KRAKATAU BLUE WATER	Wastewater treatment facilities operation and maintenance	-	67.00	67.00	-	67.00	67.00	Indonesia
POSCO DAEWOO MYANMAR CORPORATION LIMITED	Trading business	-	100.00	100.00	-	100.00	100.00	Myanmar
POSCO-Italy Processing Center	Stainless steel sheet manufacturing and sales	80.00	10.00	90.00	80.00	10.00	90.00	Italy
POSCO DAEWOO E&P CANADA CORPORATION	Crude oil and natural gas mining	-	100.00	100.00	-	100.00	100.00	Canada
Myanmar POSCO C&C Company, Limited.	Steel manufacturing and sales	-	70.00	70.00	-	70.00	70.00	Myanmar
POSCO ICT VIETNAM	IT service and electric control engineering	-	100.00	100.00	-	100.00	100.00	Vietnam
Daewoo Global Development. Pte., Ltd	Real estate development	-	81.51	81.51	-	51.00	51.00	Myanmar
Myanmar POSCO Engineering & Construction Company, Limited.	Construction and engineering service	-	100.00	100.00	-	100.00	100.00	Myanmar
POS-Minerals Corporation	Mine development management and sales	-	100.00	100.00	-	100.00	100.00	USA
POSCO(Wuhu) Automotive Processing Center Co., Ltd.	Steel manufacturing and sales	68.57	31.43	100.00	68.57	31.43	100.00	China
POSCO Engineering and Construction India Private Limited	Civil engineering and construction	-	100.00	100.00	-	100.00	100.00	India

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2017

	Principal operations	Ownership (%)						Region
		December 31, 2017			December 31, 2016			
		POSCO	Subsidiaries	Total	POSCO	Subsidiaries	Total	
[Foreign]								
POSCO COATED STEEL (THAILAND) CO., LTD.	Automotive steel sheet manufacturing and sales	100.00	-	100.00	100.00	-	100.00	Thailand
Daewoo Amara Company Limited	Real estate development	-	85.00	85.00	-	98.54	98.54	Myanmar
Daewoo Power and Infra (PTY) Limited	Electricity	-	100.00	100.00	-	100.00	100.00	South Africa
POSMATE-CHINA CO., LTD	Business facility maintenance	-	100.00	100.00	-	100.00	100.00	China
Daewoo Precious Resources Co., Ltd.	Resources development	-	70.00	70.00	-	70.00	70.00	Myanmar
POSCO-Mexico Villagran								
Wire-rod Processing Center	Steel manufacturing and sales	56.75	10.00	66.75	56.75	10.00	66.75	Mexico
POSCO-CDSFC	Steel structure manufacturing	50.20	49.80	100.00	50.20	49.80	100.00	China
POSCO ChengDu Processing Center	Steel manufacturing and sales	33.00	10.00	43.00	33.00	10.00	43.00	China
POSCO SUZHOU								
Processing Center Co., Ltd.	Steel manufacturing and sales	30.00	70.00	100.00	30.00	70.00	100.00	China
POSCO E&C SMART S DE RL DE CV	Civil engineering and construction	-	100.00	100.00	-	100.00	100.00	Mexico
POSCO Philippine Manila								
Processing Center, Inc.	Steel manufacturing and sales	-	100.00	100.00	-	100.00	100.00	Philippines
POSCO E&C HOLDINGS CO., Ltd.	Holding company	-	100.00	100.00	-	100.00	100.00	Thailand
POSCO E&C (THAILAND) CO., Ltd.	Construction and engineering	-	100.00	100.00	-	100.00	100.00	Thailand
Daewoo Power PNG Ltd.	Electricity production	-	100.00	100.00	-	100.00	100.00	Papua New Guinea
PT.Krakatau Posco Social Enterprise	Social enterprise	-	100.00	100.00	-	100.00	100.00	Indonesia
Ventanas Philippines Construction Inc	Construction	-	100.00	100.00	-	100.00	100.00	Philippines
POSCO E&C Mongolia	Construction and engineering service	-	100.00	100.00	-	100.00	100.00	Mongolia
POSCO Gulf SFC LLC	Steel manufacturing and sales	-	97.76	97.76	-	81.93	81.93	United Arab Emirates
SANPU TRADING Co., Ltd.	Raw material trading	-	70.00	70.00	-	70.00	70.00	China
Zhangjiagang BLZ Pohang								
International Trading	Steel Intermediate trade	-	100.00	100.00	-	100.00	100.00	China
POSCO MESDC S.A. DE C.V.	Logistics & Steel sales	-	56.80	56.80	-	56.80	56.80	Mexico
POSCO ICT-China	IT service and DVR business	-	100.00	100.00	-	100.00	100.00	China
Pos-Sea Pte Ltd	Steel Intermediate trade	-	100.00	100.00	-	67.54	67.54	Singapore
POSCO Europe Steel Distribution Center	Logistics & Steel sales	50.00	20.00	70.00	50.00	20.00	70.00	Slovenia
POSCO ENGINEERING (THAILAND) CO., LTD.	Construction and engineering service	-	100.00	100.00	-	100.00	100.00	Thailand
POSCO VST CO., LTD.	Stainless steel sheet manufacturing and sales	95.65	-	95.65	95.65	-	95.65	Vietnam
POSCO Maharashtra Steel Private Limited	Steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	India
POSCO India Chennai Steel								
Processing Centre Pvt.Ltd.	Steel manufacturing and sales	93.34	1.98	95.32	100.00	-	100.00	India
POSCO TNPC Otomotiv Celik San. Ve Tic. A.S	Steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	Turkey
POSCO VIETNAM HOLDINGS CO., LTD (formerly, POSCO VNPC Co., Ltd.)	Steel manufacturing and sales	83.54	5.29	88.83	70.00	-	70.00	Vietnam
POSCO(Liaoning) Automotive								
Processing Center Co., Ltd.	Steel manufacturing and sales	90.00	10.00	100.00	90.00	10.00	100.00	China
POSCO Indonesia Jakarta Processing Center	Steel manufacturing and sales	65.00	20.00	85.00	65.00	20.00	85.00	Indonesia
POSCO E&C VENEZUELA C.A.	Civil engineering and construction	-	100.00	100.00	-	100.00	100.00	Venezuela
PT.MRI	Mine development	65.00	-	65.00	65.00	-	65.00	Indonesia
POSCO TMC INDIA PRIVATE LIMITED	Steel manufacturing and sales	-	100.00	100.00	-	100.00	100.00	India
POSCO-AAPC	Steel manufacturing and sales	-	97.80	97.80	-	97.80	97.80	USA
PT PEN INDONESIA	Construction	-	100.00	100.00	-	100.00	100.00	Indonesia
POSCO(Yantai) Automotive								
Processing Center Co., Ltd.	Steel manufacturing and sales	90.00	10.00	100.00	90.00	10.00	100.00	China
POSCO India Steel								
Distribution Center Private Ltd.	Steel logistics	-	100.00	100.00	-	100.00	100.00	India
POSCO China Dalian Plate								
Processing Center Co., Ltd.	Plate manufacturing and sales	80.00	10.00	90.00	80.00	10.00	90.00	China
POSCO-South Asia Company Limited	Steel sales	100.00	-	100.00	100.00	-	100.00	Thailand
POSCO SS-VINA Co., Ltd	Steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	Vietnam
PT.POSCO ICT INDONESIA	IT service and electric control engineering	-	66.99	66.99	-	66.99	66.99	Indonesia
POSCO NCR Coal Ltd.	Coal sales	-	100.00	100.00	-	100.00	100.00	Canada
POSCO WA PTY LTD	Iron ore sales & mine development	100.00	-	100.00	100.00	-	100.00	Australia
POSCO Engineering and Construction - UZ	Civil engineering and construction	-	100.00	100.00	-	100.00	100.00	Uzbekistan
POSCO AUSTRALIA GP PTY LIMITED	Resource development	-	100.00	100.00	-	100.00	100.00	Australia
POSCO DAEWOO POWER (PNGPOM) LTD.	Electricity production	-	100.00	100.00	-	100.00	100.00	Papua New Guinea
PT. KRAKATAU POSCO ENERGY	Electricity production construction and operation	-	90.00	90.00	-	90.00	90.00	Indonesia
POSCO DAEWOO AMERICA CORP.	Trading business	-	100.00	100.00	-	100.00	100.00	USA
POSCO DAEWOO DEUTSCHLAND GMBH	Trading business	-	100.00	100.00	-	100.00	100.00	Germany
POSCO DAEWOO JAPAN Corp	Trading business	-	100.00	100.00	-	100.00	100.00	Japan
POSCO DAEWOO SINGAPORE PTE LTD.	Trading business	-	100.00	100.00	-	100.00	100.00	Singapore
POSCO DAEWOO ITALIA S.R.L.	Trading business	-	100.00	100.00	-	100.00	100.00	Italy
POSCO DAEWOO CHINA CO., LTD	Trading business	-	100.00	100.00	-	100.00	100.00	China
Daewoo Textile LLC	Textile manufacturing	-	100.00	100.00	-	100.00	100.00	Uzbekistan
POSCO DAEWOO AUSTRALIA HOLDINGS PTY. LTD.	Resource development	-	100.00	100.00	-	100.00	100.00	Australia
POSCO MAURITIUS LIMITED	Coal development and sales	-	100.00	100.00	-	100.00	100.00	Mauritius
PT. KRAKATAU POSCO	Steel manufacturing and sales	70.00	-	70.00	70.00	-	70.00	Indonesia
POSCO DAEWOO MEXICO S.A. de C.V.	Trading business	-	100.00	100.00	-	100.00	100.00	Mexico

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of DECEMBER 31, 2017

Principal operations	Ownership (%)						Region
	December 31, 2017			December 31, 2016			
	POSCO	Subsidiaries	Total	POSCO	Subsidiaries	Total	
[Foreign]							
Daewoo International Guangzhou Corp.	-	100.00	100.00	-	100.00	100.00	China
POSCO DAEWOO MALAYSIA SDN BHD	-	100.00	100.00	-	100.00	100.00	Malaysia
PT. POSCO INDONESIA INTI	99.99	-	99.99	99.99	-	99.99	Indonesia
POSCO DAEWOO SHANGHAI CO., LTD.	-	100.00	100.00	-	100.00	100.00	China
PGSF, L.P.	-	100.00	100.00	-	100.00	100.00	USA
POSCO DAEWOO INDIA PVT., LTD.	-	100.00	100.00	-	100.00	100.00	India
POSCO(Daier) IT Center Development Co., Ltd.	-	100.00	100.00	-	100.00	100.00	China
PT. POSCO E&C INDONESIA	-	100.00	100.00	-	100.00	100.00	Indonesia
HUME COAL PTY LTD	-	100.00	100.00	-	100.00	100.00	Australia
Brazil Sao Paulo Steel Processing Center	-	76.00	76.00	-	76.00	76.00	Brazil
DAESAN (CAMBODIA) Co., Ltd.	-	100.00	100.00	-	100.00	100.00	Cambodia
POSCO ENGINEERING & CONSTRUCTION DO BRAZIL LTDA.	-	100.00	100.00	-	100.00	100.00	Brazil
POSCO ASSAN TST STEEL INDUSTRY	60.00	10.00	70.00	60.00	10.00	70.00	Turkey
HONG KONG POSCO E&C (CHINA) INVESTMENT Co., Ltd.	-	100.00	100.00	-	100.00	100.00	Hongkong
Zhangjiagang Pohang Refractories Co., Ltd.(*1)	-	51.00	51.00	-	-	-	China
Golden Lace DAEWOO Company Limited	-	60.00	60.00	-	-	-	Myanmar
POSCO RU Limited Liability Company	100.00	-	100.00	-	-	-	Russia
POSCO DAEWOO UKRAINE LLC	-	100.00	100.00	-	-	-	Ukraine
KIS Devonian Canada Corporation	-	100.00	100.00	-	-	-	Canada
POSEC Hawaii, Inc.	-	-	-	-	100.00	100.00	USA
POSCO India Delhi Steel Processing Centre Private Limited	-	-	-	66.40	10.00	76.40	India
USA-SRDC	-	-	-	-	100.00	100.00	USA
POSCO-Vietnam Processing Center Co., Ltd.	-	-	-	87.07	4.98	92.05	Vietnam
POSCO MAPC SA DE CV	-	-	-	80.00	20.00	100.00	Mexico
Yingkou Puxiang Trade Co., Ltd.	-	-	-	-	-	-	-
SANTOS CMI Guatemala S.A.	-	-	-	-	100.00	100.00	China
POSCO India Ahmedabad Steel Processing Center Pvt.Ltd.	-	-	-	-	100.00	100.00	Guatemala
COINSA INGENIERIA Y PETROQUIMICA S.R.L	-	-	-	-	-	-	India
POSCO VIETNAM HOLDINGS CO., LTD	-	-	-	-	50.00	50.00	Bolivia
Kwanika Copper Corporation (formerly, Daewoo Minerals Canada Corporation)(*2)	-	-	-	79.28	20.72	100.00	Vietnam
Chongqing POSCO CISL Automotive Steel Co., Ltd.	-	-	-	-	-	-	Canada
POSCO YongXin Rare Earth Metal Co., Ltd.	-	-	-	51.00	-	51.00	China
PT. POSCO MTECH INDONESIA	-	-	-	-	51.60	51.60	China
POSCO (Zhangjiagang) STS Processing Center Co., Ltd	-	-	-	-	99.98	99.98	Indonesia
EPC EQUITIES LLP	-	-	-	-	-	-	China
SANTOS CMI CONSTRUCTION TRADING LLP	-	-	-	-	100.00	100.00	England
SANTOS CMI INC. USA	-	-	-	-	80.00	80.00	England
SANTOS CMI ENGENHARIA E CONSTRUÇÕES LTDA	-	-	-	-	99.90	99.90	USA
SANTOS CMI PERU S.A.	-	-	-	-	99.98	99.98	Brazil
SANTOS CMI CONSTRUCCIONES S.A.	-	-	-	-	99.99	99.99	Peru
GENTECH INTERNATIONAL INC.	-	-	-	-	100.00	100.00	Uruguay
SANTOS CMI S.A.	-	-	-	-	90.00	90.00	Panama
SANTOS CMI CONSTRUCCIONES DE CHILE S.A.	-	-	-	-	80.00	80.00	Ecuador
COMPANIADAEWOOAUTOMATIZACION &CONTROL, GENESYS S.A.	-	-	-	-	99.00	99.00	Chile
POSCO Electrical Steel India Private Limited	-	-	-	-	90.00	90.00	Ecuador
	-	-	-	100.00	-	100.00	India

(*1) Reclassified to subsidiary from associate during the year ended December 31, 2017.

(*2) Reclassified to joint venture from subsidiary during the year ended December 31, 2017.

The equity of controlling company increased by ₩16,288 million (POSCO DAEWOO Corporation, POSMATE and others) and ₩8,650 million (POSCO Processing & Service and others) in 2017 and 2016, respectively, as a result of changes in the Company's ownership interests in subsidiaries that did not result in a loss of control.

Cash dividends paid to POSCO by subsidiaries in 2017 and 2016 amounted to ₩70,087 million and ₩75,830 million, respectively.

As of December 31, 2017, there are no restrictions on the ability of subsidiaries to transfer funds to the controlling company, such as in the form of cash dividends, repayment of loans or payment of advances.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

(c) Summarized financial information of principal subsidiaries as of and for the years ended December 31, 2017 and 2016 are as follows:

1) December 31, 2017

(in millions of Won)

Company	Assets	Liabilities	Equity	Sales	Net income (loss)
[Domestic]					
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	₩ 6,644,139	3,992,685	2,651,454	6,262,765	61,765
POSCO Processing&Service	519,855	193	519,662	546,443	(9,169)
POSCO COATED & COLOR STEEL Co., Ltd.	407,628	187,010	220,618	885,160	19,078
POSCO ICT	634,469	235,824	398,645	918,345	42,376
POSCO A&C	150,473	120,010	30,463	224,396	806
POSCO Venture Capital Co., Ltd.	391,301	274,056	117,245	26,335	5,239
eNtoB Corporation	123,216	82,552	40,664	678,444	3,422
POSCO CHEMTECH	791,425	148,219	643,206	1,163,918	72,870
POSCO M-TECH	142,854	60,179	82,675	257,832	9,665
POSCO ENERGY CO., LTD.	4,697,407	3,001,544	1,695,863	1,578,026	70,404
POSCO DAEWOO Corporation	8,181,642	5,406,016	2,775,626	20,891,526	150,381
[Foreign]					
POSCO America Corporation	₩ 313,481	239,960	73,521	667,047	(3,514)
POSCO AUSTRALIA PTY LTD (*1)	551,908	45,670	506,238	160,918	45,958
POSCO Asia Co., Ltd.	2,191,817	2,016,697	175,120	4,299,047	9,182
POSCO-CTPC Co., Ltd.	108,742	69,963	38,779	256,742	2,151
POSCO E&C Vietnam Co., Ltd.	134,067	101,378	32,689	65,720	(20,160)
Zhangjiagang Pohang Stainless Steel Co., Ltd.	1,115,157	557,949	557,208	2,922,920	106,866
POSCO (Thailand) Company Limited	129,639	64,897	64,742	340,290	9,236
Qingdao Pohang Stainless Steel Co., Ltd.	174,951	82,443	92,508	375,775	4,402
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	395,835	259,574	136,261	709,405	13,762
POSCO JAPAN Co., Ltd.	585,611	461,618	123,993	1,537,288	9,759
POSCO-India Pune Processing Center. Pvt. Ltd.	187,129	163,557	23,572	444,172	13,909
POSCO Japan PC CO.,LTD	296,887	248,872	48,015	582,499	6,066
POSCO-CFPC Co., Ltd.	175,978	128,242	47,736	696,950	3,451
POSCO E&C CHINA Co., Ltd.	87,168	50,851	36,317	70,150	(5,130)
POSCO MPPC S.A. de C.V.	390,013	316,406	73,607	650,373	10,389
POSCO-VIETNAM Co., Ltd.	429,485	397,418	32,067	654,780	665
POSCO MEXICO S.A. DE C.V.	640,618	431,734	208,884	597,170	4,786
PT. Bio Inti Agrindo	198,794	170,420	28,374	15,227	(3,119)
POSCO Thainox Public Company Limited	427,736	129,600	298,136	542,704	10,405
DONG FANG JIN HONG	454,289	318,519	135,770	37,283	151
POSCO(Guangdong) Automotive Steel Co., Ltd.	321,895	224,321	97,574	320,178	4,037
POSCO COATED STEEL (THAILAND) CO., LTD.	340,120	248,913	91,207	219,132	(13,297)
Daewoo Amara Company Limited	355,096	287,153	67,943	5,936	(16,632)
POSCO VST CO., LTD.	292,495	264,783	27,712	483,890	6,122
POSCO Maharashtra Steel Private Limited	1,560,655	1,136,456	424,199	1,381,792	98,528
POSCO Inida Chennai Steel Processing Centre Pvt. Ltd.	276,211	218,294	57,917	284,164	12,409
POSCO VIETNAM HOLDINGS CO., LTD (formerly, POSCO-VNPC CO., LTD.)	162,961	118,398	44,563	241,862	641
POSCO(Liaoning) Automotive Processing Center Co., Ltd.	85,791	52,984	32,807	191,279	2,782
POSCO SS VINA Co., Ltd.	753,725	734,407	19,318	499,523	(55,098)
PT. KRAKATAU POSCO ENERGY	295,080	166,467	128,613	39,419	12,564
POSCO DAEWOO AMERICA CORP.	397,865	344,705	53,160	1,354,784	2,593
POSCO DAEWOO DEUTSCHLAND GMBH	226,873	213,296	13,577	527,376	1,123
POSCO DAEWOO JAPAN Corp	187,541	180,053	7,488	734,141	357
POSCO DAEWOO SINGAPORE PTE LTD.	173,283	169,202	4,081	1,435,960	63
POSCO DAEWOO ITALIA S.R.L.	153,270	146,566	6,704	461,988	1,710
POSCO DAEWOO CHINA CO., LTD	34,659	22,563	12,096	332,246	(3,728)
PT. KRAKATAU POSCO	3,345,645	3,275,109	70,536	1,549,443	(134,330)
POSCO DAEWOO MEXICO S.A. de C.V.	80,802	71,240	9,562	250,216	858
POSCO DAEWOO INDIA PVT., LTD.	108,234	101,415	6,819	703,233	3,413
POSCO ENGINEERING & CONSTRUCTION DO BRAZIL LTDA.	93,219	379,855	(286,636)	88,940	(13,205)
POSCO ASSAN TST STEEL INDUSTRY	555,745	607,526	(51,781)	526,406	6,532

(*1) Summarized financial information of POSCO AUSTRALIA PTY LTD, a subsidiary of POSCO, is based on consolidated amounts. The financial information for the other entities is based on separate financial statements.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

2) December 31, 2016

(in millions of Won)

Company		Assets	Liabilities	Equity	Sales	Net income (loss)
[Domestic]						
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	₩	6,406,125	3,792,507	2,613,618	5,496,137	(867,471)
POSCO Processing&Service		1,632,940	845,450	787,490	2,593,388	(27,605)
POSCO COATED & COLOR STEEL Co., Ltd.		382,815	175,511	207,304	771,337	30,426
POSCO ICT		649,838	277,065	372,773	838,258	27,891
POSCO A&C		126,447	94,345	32,102	254,495	423
POSCO Venture Capital Co., Ltd.		337,434	223,688	113,746	24,660	1,330
eNtoB Corporation		87,987	49,880	38,107	567,875	1,759
POSCO CHEMTECH		703,337	115,292	588,045	1,076,455	59,820
POSCO M-TECH		150,790	73,794	76,996	259,048	2,501
POSCO ENERGY CO., LTD.		4,520,521	3,115,520	1,405,001	1,657,890	(135,428)
POSCO DAEWOO Corporation		7,419,600	4,988,663	2,430,937	15,417,230	123,709
[Foreign]						
POSCO America Corporation	₩	344,395	257,712	86,683	741,695	(1,889)
POSCO AUSTRALIA PTY LTD (*1)		526,019	39,710	486,309	144,809	21,761
POSCO Asia Co., Ltd.		2,202,195	2,014,476	187,719	3,654,181	8,010
POSCO-CTPC Co., Ltd.		95,330	56,498	38,832	239,419	1,680
POSCO E&C Vietnam Co., Ltd.		199,162	140,750	58,412	126,922	(11,897)
Zhangjiagang Pohang Stainless Steel Co., Ltd.		1,039,137	562,090	477,047	2,518,260	90,118
POSCO (Thailand) Company Limited		111,962	67,758	44,204	206,153	1,777
Qingdao Pohang Stainless Steel Co., Ltd.		185,993	92,722	93,271	411,129	12,778
POSCO(Suzhou) Automotive Processing Center Co., Ltd.		357,157	227,128	130,029	621,161	11,560
POSCO JAPAN Co., Ltd.		639,896	514,388	125,508	1,256,804	2,448
POSCO-India Pune Processing Center. Pvt. Ltd.		170,249	159,414	10,835	368,740	1,281
POSCO Japan PC CO.,LTD		301,910	255,694	46,216	325,871	4,472
POSCO-CFPC Co., Ltd.		173,723	126,753	46,970	550,356	5,515
POSCO E&C CHINA Co., Ltd.		138,961	95,205	43,756	81,882	4,791
POSCO MPPC S.A. de C.V.		287,498	237,312	50,186	401,579	4,353
POSCO-VIETNAM Co., Ltd.		455,383	419,923	35,460	609,374	22,691
POSCO MEXICO S.A. DE C.V.		781,307	550,807	230,500	542,253	380
PT. Bio Inti Agrindo		181,493	151,850	29,643	1,807	(6,102)
POSCO Thainox Public Company Limited		399,667	90,877	308,790	477,976	19,131
DONG FANG JIN HONG		500,489	353,012	147,477	41,849	(5,607)
POSCO(Guangdong) Automotive Steel Co., Ltd.		329,855	230,726	99,129	250,352	(8,801)
POSCO COATED STEEL (THAILAND) CO., LTD.		346,381	239,365	107,016	71,426	(13,006)
Daewoo Amara Company Limited		290,399	239,497	50,902	-	4,723
POSCO VST CO., LTD.		335,103	310,386	24,717	401,972	4,354
POSCO Maharashtra Steel Private Limited		1,347,401	1,020,233	327,168	832,320	(9,888)
POSCO India Delhi Steel Processing Centre Private Limited		109,166	101,627	7,539	222,332	1,846
POSCO VIETNAM HOLDINGS CO., LTD (formerly, POSCO-VNPC CO., LTD.)		3,683	541	3,142	1,674	(1,204)
POSCO(Liaoning) Automotive Processing Center Co., Ltd.		70,385	38,528	31,857	176,584	2,574
POSCO SS VINA Co., Ltd.		814,883	734,223	80,660	279,023	(75,217)
PT. KRAKATAU POSCO ENERGY		341,534	203,792	137,742	39,769	14,174
POSCO DAEWOO AMERICA CORP.		533,571	476,380	57,191	1,329,374	643
POSCO DAEWOO DEUTSCHLAND GMBH		205,346	193,007	12,339	401,379	1,284
POSCO DAEWOO JAPAN Corp		163,596	155,783	7,813	642,276	623
POSCO DAEWOO SINGAPORE PTE LTD.		211,122	206,586	4,536	610,787	55
POSCO DAEWOO ITALIA S.R.L.		102,986	98,041	4,945	405,543	1,818
POSCO DAEWOO CHINA CO., LTD		49,441	32,779	16,662	342,802	(35,625)
PT. KRAKATAU POSCO		3,763,150	3,526,459	236,691	1,296,938	(218,461)
POSCO DAEWOO MEXICO S.A. de C.V.		130,781	121,359	9,422	250,033	1,017
POSCO DAEWOO INDIA PVT., LTD.		172,810	169,051	3,759	297,686	1,253
POSCO ENGINEERING & CONSTRUCTION DO BRAZIL LTDA.		115,425	430,779	(315,354)	7,835	(275,101)
POSCO ASSAN TST STEEL INDUSTRY		612,442	677,829	(65,387)	454,791	(105,849)

(*1) Summarized financial information of POSCO AUSTRALIA PTY LTD, a subsidiary of POSCO, is based on consolidated amounts. The financial information for the other entities is based on separate financial statements.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

(d) Details of non-controlling interest as of and for the years ended December 31, 2017 and 2016 are as follows:

1) December 31, 2017

(in millions of Won)

	POSCO DAEWOO Corporation	PT. KRAKATAU POSCO	POSCO CHEMTECH	POSCO ENGINEERING & CONSTRUCTION CO., LTD.	POSCO ENERGY CO., LTD.	Others	Total
Current assets	₩ 4,483,544	557,041	441,325	4,161,410	1,054,538	8,579,813	19,277,671
Non-current assets	4,590,394	2,771,504	316,724	2,400,787	2,859,824	6,676,559	19,615,792
Current liabilities	(4,221,443)	(1,237,255)	(145,649)	(3,352,358)	(785,462)	(8,313,902)	(18,056,069)
Non-current liabilities	(1,549,013)	(1,933,247)	(970)	(479,772)	(2,200,065)	(2,048,454)	(8,211,521)
Equity	3,303,482	158,043	611,430	2,730,067	928,835	4,894,016	12,625,873
Non-controlling interests	1,224,303	47,413	244,572	1,288,615	762,390	974,941	4,542,234
Sales	20,891,526	1,635,837	1,163,918	6,262,765	1,578,026	23,547,072	55,079,144
Profit (loss) for the period	115,321	(117,729)	101,019	233,169	70,795	258,053	660,628
Profit (loss) attributable							
to non-controlling interests	42,739	(35,318)	40,408	110,058	7,770	39,605	205,262
Cash flows from operating activities	128,875	(27,817)	20,042	(84,840)	30,295	140,418	206,973
Cash flows from investing activities	(86,365)	(5,502)	(18,699)	(171,924)	(2,792)	(63,621)	(348,903)
Cash flows from financing activities							
(before dividends to non-controlling interest)	(19,295)	31,782	8	150,801	220,317	(38,090)	345,523
Dividends to non-controlling interest	(22,597)	-	(7,088)	-	(24,183)	(12,777)	(66,645)
Effect of exchange rate fluctuation							
on cash held	(459)	(147)	(6)	(3,541)	-	(15,532)	(19,685)
Net increase (decrease)							
in cash and cash equivalents	159	(1,684)	(5,743)	(109,504)	223,637	10,398	117,263

2) December 31, 2016

(in millions of Won)

	POSCO DAEWOO Corporation	PT. KRAKATAU POSCO	POSCO CHEMTECH	POSCO ENGINEERING & CONSTRUCTION CO., LTD.	POSCO ENERGY CO., LTD.	Others	Total
Current assets	₩ 4,038,313	460,376	397,370	4,812,163	713,039	9,696,140	20,117,401
Non-current assets	4,510,085	3,304,292	243,401	1,687,052	3,038,665	7,749,277	20,532,772
Current liabilities	(3,662,811)	(1,120,077)	(109,016)	(3,255,178)	(937,668)	(9,669,053)	(18,753,803)
Non-current liabilities	(1,681,182)	(2,337,612)	(2,337)	(436,959)	(2,172,226)	(2,856,498)	(9,486,814)
Equity	3,204,405	306,979	529,418	2,807,078	641,810	4,919,866	12,409,556
Non-controlling interests	1,271,750	92,094	211,767	1,324,965	514,200	945,962	4,360,738
Sales	15,417,550	1,244,711	1,076,455	5,496,137	1,657,890	23,251,563	48,144,306
Profit (loss) for the period	113,832	(187,151)	41,829	(744,083)	(130,809)	(461,034)	(1,367,416)
Profit (loss) attributable							
to non-controlling interests	45,177	(56,145)	16,732	(351,214)	(14,357)	(312,297)	(672,104)
Cash flows from operating activities	337,338	45,672	30,295	(211,182)	18,107	53,050	273,280
Cash flows from investing activities	(35,054)	(8,804)	(42,021)	(102,939)	(1,047)	(253,206)	(443,071)
Cash flows from financing activities							
(before dividends to non-controlling interest)	(295,226)	(36,286)	(1,250)	(20,953)	(2,875)	204,797	(151,793)
Dividends to non-controlling interest	(22,597)	-	(4,726)	(14,800)	(24,378)	(7,349)	(73,850)
Effect of exchange rate fluctuation							
on cash held	10	67	1	760	-	1,687	2,525
Net increase (decrease)							
in cash and cash equivalents	(15,529)	649	(17,701)	(349,114)	(10,193)	(1,021)	(392,909)

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2017

(e) Details of associates and joint ventures

1) Associates

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

Investee	Category of business	Ownership (%)		Region
		2017	2016	
[Domestic]				
EQP POSCO Global NO1 Natural Resources PEF	Investment in new technologies	31.14	29.37	Seoul
POSCO PLANTEC Co., Ltd.(*2)	Construction of industrial plant	73.94	73.94	Ulsan
SNNC	Raw material manufacturing and sales	49.00	49.00	Gwangyang
QSONE Co.,Ltd.	Real estate rental and facility management	50.00	50.00	Seoul
Chun-cheon Energy Co., Ltd	Electricity generation	45.67	29.90	Chuncheon
Incheon-Gimpo Expressway Co., Ltd.(*1)	Construction	18.26	20.04	Anyang
BLUE OCEAN Private Equity Fund	Private equity financial	27.52	27.52	Seoul
UITrans LRT Co., Ltd.	Transporting	38.19	38.19	Seoul
Keystone NO. 1. Private Equity Fund	Private equity financial	40.45	40.45	Seoul
CHUNGJU ENTERPRISE CITY DEVELOPMENT Co.,Ltd	Real estate development	29.53	29.53	Chungju
Daesung Steel(*1)	Steel sales	17.54	17.54	Busan
KoFC POSCO HANWHA KB Shared Growth NO. 2. Private Equity Fund(*1)	Investment in new technologies	12.50	12.50	Seoul
KONES, Corp.	Technical service	41.67	41.67	Gyeongju
Gale International Korea, LLC	Real estate rental	29.90	29.90	Seoul
Pohang Techno Valley PFV Corporation(*3)	Real estate development, supply and rental	57.39	30.28	Pohang
Gunggi Green Energy(*1)	Electricity generation	19.00	19.00	Hwaseong
Pohang Special Welding Co.,Ltd.	Welding material and tools manufacturing and sales	50.00	50.00	Pohang
KC Chemicals CORP(*1)	Machinery manufacturing	19.00	19.00	Hwaseong
Posco-IDV Growth Ladder IP Fund(*1)	Investment in new technologies	17.86	17.86	Seoul
DAEHO GLOBAL MANAGEMENT CO., LTD.	Investment advisory service	35.82	35.82	Pohang
Clean Gimpo Co., Ltd.	Construction	29.58	29.58	Gimpo
Postech Early Stage Fund(*1)	Investment in new technologies	10.00	10.00	Pohang
POSCO Energy Valley Fund	Investment in new technologies	20.00	20.00	Pohang
Pureun Tongyeong Enviro Co., Ltd.	Sewerage treatment	20.40	20.40	Tongyeong
Posgreen Co., Ltd.(*1)	Lime and plaster manufacturing	19.00	19.00	Gwangyang
Pohang E&E Co., Ltd.	Investment in waste energy	30.00	30.00	Pohang
POSTECH Social Enterprise Fund(*1)	Investment in new technologies	9.17	9.17	Seoul
Applied Science Corp.	Machinery manufacturing	23.87	24.88	Paju
Noeul Green Energy(*1)	Electricity generation	10.00	10.00	Seoul
Pohang Techno Valley AMC	Construction	29.50	29.50	Pohang
New Songdo International City Development, LLC	Real estate rental	29.90	29.90	Seoul
Mokpo Deayang Industrial Corporation	Real estate development and rental	27.40	27.40	Mokpo
Clean Iksan Co., Ltd.	Construction	23.50	23.50	Iksan
Innovalloy Co., Ltd.	Real estate development	28.77	28.77	Yongin
Pure Gimpo Co., Ltd.	Construction	28.79	28.79	Seoul
Garolim Tidal Power Plant Co.,Ltd	Tidal power plant construction and management	32.13	32.13	Seosan
2016 PoscoPlutus New Technology Investment Fund	Investment in new technologies	25.17	25.17	Seoul
Hyundai Invest Guggenheim CLO Private Special Asset Investment Trust II	Investment in new technologies	38.47	38.47	Seoul
PoscoPlutus Bio Fund(*1)	Investment in new technologies	11.97	11.97	Seoul
PoscoPlutus Project Fund(*1)	Investment in new technologies	11.91	11.91	Seoul
Posco Agrifood Export Investment Fund	Investment in new technologies	30.00	30.00	Seoul
PoscoPlutus Project II Investment Fund(*1)	Investment in new technologies	0.61	0.61	Seoul
Posco Culture Contents Fund	Investment in new technologies	31.67	31.67	Seoul
PCC Centroid 1st Fund(*4)	Investment in new technologies	24.10	-	Seoul
PCC Amberstone Private Equity Fund I(*1,4)	Investment in new technologies	9.71	-	Seoul
POSCO Advanced Technical Staff Fund(*1,4)	Investment in new technologies	15.87	-	Seoul
POSCO 4th Industrial Revolution Fund(*4)	Investment in new technologies	20.00	-	Seoul
METAPOLIS Co.,Ltd.(*6)	Multiplex development	-	40.05	Hwaseong
Universal Studios Resort Asset Management Corporation(*5)	Real estate services	-	26.17	Seoul
Busan-Gimhae Light Rail Transit Co., Ltd.(*5)	Transporting	-	25.00	Gimhae

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

Investee	Category of business	Ownership (%)		Region
		2017	2016	
[Foreign]				
South-East Asia Gas Pipeline Company Ltd.	Pipeline construction and management	25.04	25.04	Myanmar
AES-VCM Mong Duong Power Company Limited	Electricity generation	30.00	30.00	Vietnam
7623704 Canada Inc.(*1)	Investments management	10.40	10.40	Canada
Eureka Moly LLC	Raw material manufacturing and sales	20.00	20.00	USA
AMCI (WA) PTY LTD	Iron ore sales & mine development	49.00	49.00	Australia
Nickel Mining Company SAS	Raw material manufacturing and sales	49.00	49.00	New Caledonia
NCR LLC	Coal sales	29.41	29.41	Canada
KOREA LNG LTD.	Gas production and sales	20.00	20.00	England
PT. Batutua Tembaga Raya	Raw material manufacturing and sales	22.00	24.10	Indonesia
Zhongyue POSCO (Qinhuangdao)				
Tinplate Industrial Co., Ltd	Tinplate manufacturing and sales	34.00	34.00	China
PT. Wampu Electric Power	Construction and civil engineering	20.00	20.00	Indonesia
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	Steel processing and sales	25.00	25.00	China
VSC POSCO Steel Corporation	Steel processing and sales	50.00	50.00	Vietnam
IMFA ALLOYS FINLEASE LTD	Raw material manufacturing and sales	24.00	24.00	India
General Medicines Company Ltd.	Medicine manufacturing and sales	33.00	33.00	Sudan
PT.INDONESIA POS CHEMTECH CHOSUN Ref	Refractory manufacturing and sales	30.19	30.19	Indonesia
POSK(Pinghu) Steel Processing Center Co., Ltd.	Steel processing and sales	20.00	20.00	China
SHANGHAI LANSHENG DAEWOO CORP.	Trading	49.00	49.00	China
POS-SEAHSTEELWIRE(TIANJIN)CO.,Ltd	Steel processing and sales	25.00	25.00	China
SHANGHAI WAIGAOQIAO FREE TRADE ZONE				
LANSHENG DAEWOO IN'L TRADING CO., LTD.	Trading	49.00	49.00	China
PT. Tanggamus Electric Power(*1)	Construction and civil engineering	17.50	17.50	Indonesia
NS-Thainox Auto Co., Ltd.	Steel manufacturing and sales	49.00	49.00	Vietnam
Hamparan Mulya	Resource development	45.00	45.00	Indonesia
Sebang Steel	Scrap sales	49.00	49.00	Japan
GLOBAL KOMSCO Daewoo LLC	Cotton celluloid manufacturing and sales	35.00	35.00	Uzbekistan
POSCO-Poggenamp Electrical Steel Pvt. Ltd.	Steel manufacturing and sales	26.00	26.00	India
KIRIN VIETNAM CO., LTD(*1)	Panel manufacturing	19.00	19.00	Vietnam
POSCHROME (PROPRIETARY) LIMITED	Raw material manufacturing and sales	50.00	50.00	South Africa
CAML RESOURCES PTY LTD	Raw material manufacturing and sales	33.34	33.34	Australia
KG Power(M) SDN. BHD	Energy & resource development	20.00	20.00	Malaysia
LI3 ENERGY INC	Energy & resource development	26.06	26.06	Peru
LLP POSUK Titanium	Titanium manufacturing and sales	36.83	36.83	Kazakhstan
POS-SeAH Steel Wire (Thailand) Co., Ltd.	Steel manufacturing and sales	25.00	25.00	Thailand
Jupiter Mines Limited(*1)	Energy & resource development	17.06	17.08	Australia
KRAKATAU POS-CHEM	Chemical by-product			
DONG-SUH CHEMICAL(*1)	manufacturing and sales	19.00	19.00	Indonesia
SAMHWAN VINA CO., LTD(*1,4)	Steel manufacturing and sales	19.00	-	Vietnam
JB CLARK HILLS(*4)	Construction	25.00	-	Philippines
Saudi-Korean Company for Maintenance				
Properties Management LLC(*1,4)	Building management	19.00	-	Saudi Arabia
AN KHANH NEW CITY				
DEVELOPMENT J.V CO., LTD.(*5)	Highway construction and new town development	-	50.00	Vietnam
Fifth Combined Heat and Power Plant LLC(*5)	Thermal power generation	-	30.00	Mongolia
Chongqing CISL High Strength				
Cold Rolling Steel Co., Ltd.(*6)	Steel manufacturing and sales	-	10.00	China

(*1) Considering the composition of board of directors, the Company is able to exercise significant influence even though the Company's percentage of ownership is below 20%.

(*2) On September 30, 2015, in order to improve its financial standing and normalize operation, the associates reached a workout agreement with its Creditor Financial Institutions Committee. As a result, the Company lost its control and classified its shares as investment in associate.

(*3) Considering the composition of board of directors, the Company does not have control and classified its shares as investment in an associate, even though the Company's percentage of ownership is over 50%.

(*4) These associates were newly established or acquired in 2017.

(*5) Excluded from associates due to the disposal of shares during the year ended December 31, 2017.

(*6) Excluded from associates due to loss of significant influence during the year ended December 31, 2017.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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2) Joint ventures

Details of joint ventures as of December 31, 2017 and 2016 are as follows:

Investee	Category of business	Ownership (%)		Region
		2017	2016	
[Domestic]				
POSCO MITSUBISHI CARBON TECHNOLOGY	Steel processing and sales	60.00	60.00	Gwangyang
POSCO-SGI Falcon Pharmaceutic Bio Secondary Fund 1(*1)	Investment in new technologies	24.55	-	Seoul
POSCO-KB Shipbuilding Restructuring Fund(*1)	Investment in new technologies	18.75	-	Seoul
POSCO-NSC Venture Fund(*1)	Investment in new technologies	16.67	-	Seoul
PCC L&K New Technology 1st Fund(*1)	Investment in new technologies	10.00	-	Seoul
PoscoPlutus Project 3rd Investment Fund(*1)	Investment in new technologies	5.96	-	Seoul
[Foreign]				
Roy Hill Holdings Pty Ltd	Energy & resource development	12.50	12.50	Australia
POSCO-NPS Niobium LLC	Mine development	50.00	50.00	USA
CSP - Companhia Siderurgica do Pecem	Steel manufacturing and sales	20.00	20.00	Brazil
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	Steel processing and sales	25.00	25.00	China
KOBRASCO	Steel materials manufacturing and sales	50.00	50.00	Brazil
DMSA/AMSA	Energy & resource development	4.00	4.00	Madagascar
PT. POSMI Steel Indonesia	Steel processing and sales	36.69	36.69	Indonesia
VNS-DAEWOO Co., Ltd.	Steel scrap processing and sale	40.00	40.00	Vietnam
YULCHON MEXICO S.A. DE C.V.	Tube for automobile manufacturing	19.00	19.00	Mexico
POSCO-SAMSUNG-Slovakia Processing Center	Steel processing and sales	30.00	30.00	Slovakia
United Spiral Pipe, LLC	Material manufacturing and sales	35.00	35.00	USA
Korea Siberia Wood CJSC	Forest resource development	50.00	50.00	Russia
Hyunson Engineering & Construction HYENCO	Construction	4.90	4.90	Algeria
USS-POSCO Industries	Cold-rolled steel manufacturing and sales	50.00	50.00	USA
POSCO E&C Saudi Arabia	Civil engineering and construction	40.00	40.00	Saudi Arabia
Pos-Austem Suzhou Automotive Co., Ltd(*1)	Automotive parts manufacturing	19.90	-	China
POS-AUSTEM YANTAI AUTOMOTIVE CO.,LTD(*1)	Automotive parts manufacturing	11.06	-	China
POS-AUSTEM WUHAN AUTOMOTIVE CO.,LTD(*1)	Automotive parts manufacturing	13.00	-	China
POS-InfraAuto (Suzhou) Co., Ltd(*1)	Automotive parts manufacturing	16.20	-	China
Kwanika Copper Corporation (formerly, Daewoo Minerals Canada Corporation)(*2)	Energy & resource development	35.00	-	Canada
Henan Tsingpu Ferro Alloy Co., Ltd.(*3)	Raw material manufacturing and sales	-	49.00	China
Zhangjiagang Pohang Refractories Co., Ltd.(*4)	Refractory manufacturing	-	50.00	China

(*1) These joint ventures were newly established in 2017.

(*2) Reclassified to joint venture from subsidiary during the year ended December 31, 2017.

(*3) Excluded from joint ventures due to the disposal of shares during the year ended December 31, 2017.

(*4) Reclassified to subsidiary from joint venture during the year ended December 31, 2017.

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2017

(f) Newly included subsidiaries

Consolidated subsidiaries acquired or newly established during the year ended December 31, 2017 are as follows:

Company	Date of addition	Ownership (%)	Reason
POSCO RU Limited Liability Company	January 2017	100.00	New establishment
Golden Lace DAEWOO Company Limited	April 2017	100.00	New establishment
POSCO Research & Technology	June 2017	100.00	New establishment
POSCO DAEWOO UKRAINE LLC	July 2017	100.00	New establishment
Zhangjiagang Pohang Refractories Co., Ltd.	July 2017	51.00	Reclassification from associate
Kyobo Securities Bond Plus 6M Professional Private Equity Trust W-2	October 2017	97.47	Acquisition of control
Mirae Asset Smart Q Sigma 2.0 Professional Private Equity Trust	October 2017	99.01	Acquisition of control
Kyobo Securities Bond Plus 6M Professional Private Equity Trust W-5	November 2017	99.67	Acquisition of control
KIS Devonian Canada Corporation	December 2017	100.00	Acquisition of control

(g) Excluded subsidiaries

Subsidiaries that were excluded from consolidation during the year ended December 31, 2017 are as follows:

Company	Date of exclusion	Reason
POSCO MAPC SA DE CV	January 2017	Merged into POSCO MPPC S.A. de C.V.
POSCO (Zhangjiagang) STS Processing Center Co.,	January 2017	Merged into Zhangjiagang Pohang Stainless Steel Co., Ltd.
POSCO ENGINEERING CO., LTD	February 2017	Merged into POSCO ENGINEERING & CONSTRUCTION CO., LTD.
POSCO YongXin Rare Earth Metal Co., Ltd.	March 2017	Disposal
SANTOS CMI S.A.	March 2017	Disposal
EPC EQUITIES LLP	March 2017	Disposal
SANTOS CMI Guatemala S.A.	March 2017	Disposal
COINSA INGENIERIA Y PETROQUIMICA S.R.L	March 2017	Disposal
SANTOS CMI CONSTRUCTION TRADING LLP	March 2017	Disposal
SANTOS CMI INC. USA	March 2017	Disposal
SANTOS CMI ENGENHARIA E CONSTRUCOES LTDA	March 2017	Disposal
SANTOS CMI PERU S.A.	March 2017	Disposal
SANTOS CMI CONSTRUCCIONES S.A.	March 2017	Disposal
GENTECH INTERNATIONAL INC.	March 2017	Disposal
SANTOS CMI CONSTRUCCIONES DE CHILE S.A.	March 2017	Disposal
COMPANIADAEUTOMATIZACION &CONTROL, GENESYS S.A.	March 2017	Disposal
POSCO Electrical Steel India Private Limited	March 2017	Merged into POSCO Maharashtra Steel Private Limited
POSEC Hawaii, Inc.	May 2017	Exclusion upon liquidation
PT. POSCO MTECH INDONESIA	May 2017	Disposal
POSCO VIETNAM HOLDINGS CO., LTD	July 2017	Merged into POSCO VIETNAM HOLDINGS CO., LTD (formerly, POSCO-VNPC CO., LTD.)
POSCO-Vietnam Processing Center Co., Ltd.	July 2017	Merged into POSCO VIETNAM HOLDINGS CO., LTD (formerly, POSCO-VNPC CO., LTD.)
Yingkou Puxiang Trade Co.,Ltd.	July 2017	Merged into Zhangjiagang Pohang Refractories Co., Ltd
Chongqing POSCO CISL Automotive Steel Co., Ltd.	September 2017	Loss of control
IT Engineering Co., Ltd.	November 2017	Disposal
POSCO India Delhi Steel Processing Centre Private Limited	November 2017	Merged into POSCO India Chennai Steel Processing Centre Pvt.Ltd.
POSCO India Ahmedabad Steel Processing Centre Pvt.Ltd.	November 2017	Merged into POSCO India Chennai Steel Processing Centre Pvt.Ltd.
Kwanika Copper Corporation (formerly, Daewoo Minerals Canada Corporation)	November 2017	Change in status due to a decline in stake
USA-SRDC	December 2017	Exclusion upon liquidation

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2017

2. Statement of Compliance

The consolidated financial statements have been prepared in accordance with Korean International Financial Reporting Standards ("K-IFRS"), as prescribed in the Act on External Audits of Corporations in the Republic of Korea.

The consolidated financial statements were authorized for issue by the Board of Directors on January 24, 2018, and will be submitted for approval at the shareholders' meeting to be held on March 9, 2018.

Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis, except for the following material items in the statement of financial position, as described in the accounting policy below.

- (a) Derivatives instruments are measured at fair value
- (b) Financial instruments at fair value through profit or loss
- (c) Available-for-sale financial assets are measured at fair value
- (d) Defined benefit liabilities are measured at the present value of the defined benefit obligation less the fair value of the plan assets

Functional and presentation currency

The financial statements of POSCO and subsidiaries are prepared in functional currency of the respective operation. These consolidated financial statements are presented in Korean Won, which is POSCO's functional currency which is the currency of the primary economic environment in which POSCO operates.

Use of estimates and judgments

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

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period prospectively.

(a) Judgments

Information about critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the consolidated financial statements is included in the following notes:

- Note 1 - Subsidiaries, associates and joint ventures
- Note 10 - Assets held for sale
- Note 11 - Investments in associates and joint ventures
- Note 12 - Joint operations
- Note 25 - Hybrid bonds

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

(b) Assumptions and estimation uncertainties

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next fiscal year is included in the following notes:

- Note 11 - Investments in associates and joint ventures
- Note 15 - Goodwill and other intangible assets, net
- Note 20 - Provisions
- Note 21 - Employee benefits
- Note 29 - Construction contracts
- Note 35 - Income taxes
- Note 38 - Commitments and contingencies

(c) Measurement of fair value

The Company's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities. The Company has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements, including Level 3 fair values, and reports directly to the financial officer.

The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that such valuations meet the requirements of K-IFRS including the level in the fair value hierarchy in which such valuation techniques should be classified.

Significant valuation issues are reported to the Company's Audit Committee.

When measuring the fair value of an asset or a liability, the Company uses market observable data as far as possible. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows.

- Level 1 - unadjusted quoted prices in active markets for identical assets or liabilities.
- Level 2 - inputs other than quoted prices included in Level 1 that are observable for the assets or liability, either directly or indirectly.
- Level 3 - inputs for the assets or liability that are not based on observable market data.

If the inputs used to measure the fair value of an asset or a liability might be categorized in different levels of the fair value hierarchy, then the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement. The Company recognizes transfers between levels of the fair value hierarchy at the end of the reporting period during which the change has occurred.

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2017

Information about the assumptions made in measuring fair values is included in the following note:

- Note 23 - Financial instruments

Changes in Accounting Policies

Except for the application of the amendments to standards for the first time for their reporting period beginning on January 1, 2017, as described below, the accounting policies applied by the Company in these consolidated financial statements are the same as those applied by the Company in its consolidated financial statements as of and for the year ended December 31, 2016.

(a) Amendments to K-IFRS No. 1007 "Statement of Cash Flows"

For the year beginning on January 1, 2017, the Company applied the amendments to K-IFRS No. 1007 "Statement of Cash Flows". K-IFRS No. 1007 requires liabilities related to the cash flows that were classified as a financing activity in the statement of cash flows or will be classified as a financing activity in the future should be disclosed as follows:

- Changes from financing cash flows
- Changes arising from obtaining or losing control of subsidiaries or other businesses
- The effect of changes in foreign exchange rates
- Changes in fair values
- Other changes

K-IFRS No. 1007 does not require the disclosure of comparative information of prior period. The related disclosures are included in note 39.

(b) Amendments to K-IFRS No. 1012 "Income Taxes"

For the year beginning on January 1, 2017, the Company applied the amendments to K-IFRS No. 1012 "Income Taxes". In accordance with K-IFRS No. 1012, in the case of debt instruments measured at fair value, deferred tax accounting treatment is clarified. The difference between the carrying amount and taxable base amount of the debt liabilities is considered as temporary differences, regardless of the expected recovery method. When reviewing the recoverability of deferred tax assets, the estimated of probable future taxable income may include the recovery of some of the Company's assets for more than their carrying amount if there is sufficient evidence that it is probable that the Company will recover the asset for more than its carrying amount. In addition, the estimated of probable future taxable income are determined as the amount before considering the deductible effect from reversal of the deductible temporary differences.

The Company believes that the effect of the amendments to the consolidated financial statements is not significant. Therefore, the Company has not retrospectively applied the amendments in accordance with the transitional requirements.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

3. Summary of Significant Accounting Policies

The significant accounting policies applied by the Company in preparation of its consolidated financial statements are included below. The accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements, except for those as disclosed in note 2.

Basis of consolidation

(a) Business combinations

The Company accounts for business combinations using the acquisition method when control is transferred to the Company.

The consideration transferred in the acquisition is generally measured at fair value, as are the identifiable net assets acquired. Any goodwill that arises is tested annually for impairment. Any gain on bargain purchase is recognized in profit or loss immediately. Transaction costs are expensed as incurred, except if related to the issue of debt or equity securities. The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognized in profit or loss.

Any contingent consideration payable is measured at fair value at the acquisition date. If the contingent consideration is classified as equity, then it is not remeasured and settlement is accounted for within equity. Otherwise, subsequent changes in the fair value of the contingent consideration are recognized in profit or loss.

If share-based payment awards (replacement awards) are required to be exchanged for awards held by the acquiree's employees (acquiree's awards), then all or a portion of the amount of the acquirer's replacement awards is included in measuring the consideration transferred in the business combination. This determination is based on the market-based measure of the replacement awards compared with the market-based measure of the acquiree's awards and the extent to which the replacement awards relate to pre-combination service.

(b) Non-controlling interests

Non-controlling interests are measured at their proportionate share of the acquiree's identifiable net assets at the acquisition date. Changes in the Company's interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

(c) Subsidiaries

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

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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(d) Loss of control

When the Company loses control over a subsidiary, it derecognizes the assets and liabilities of the subsidiary, and any related non-controlling interests and other components of equity. Any resulting gain or loss is recognized in profit or loss. Any interest retained in the former subsidiary is measured at fair value when control is lost.

(e) Interests in equity-accounted investees

The Company's interests in equity-control investees comprise interests in associates and joint ventures. Associates are those entities in which the Company has significant influence, but not control or joint control, over the financial and operating policies. A joint venture is an arrangement in which the Company has joint control, whereby the Company has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities.

Interests in associates and joint ventures are accounted for using the equity method. They are recognized initially at cost, which includes transaction costs. Subsequent to initial recognition, the consolidated financial statements include the Company's share of the profit or loss and other comprehensive income of equity-accounted investees, until the date on which significant influence or joint control ceases.

(f) Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated. Unrealized gains arising from transactions with equity-accounted investees are eliminated against the investment to the extent of the Company's interest in the investee. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

Foreign currency transactions and translation

(a) Foreign currency transactions

Foreign currency transactions are initially recorded using the spot exchange rate between the functional currency and the foreign currency at the date of the transaction. At the end of each reporting period, foreign currency monetary items are translated using the closing rate. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the original transaction. Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rate at the date fair value was initially determined.

Exchange differences arising on the settlement of monetary items or on translating monetary items at rates different from those at which they were translated on initial recognition during the period or in previous financial statements are recognized in profit or loss in the period in which they arise. When gains or losses on non-monetary items are recognized in other comprehensive income, exchange components of those gains or losses are recognized in other comprehensive income. Conversely, when gains or losses on non-monetary items are recognized in profit or loss, exchange components of those gains or losses are recognized in profit or loss.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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(b) Foreign operations

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

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

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation are treated as assets and liabilities of the foreign operation. Thus, they are expressed in the functional currency of the foreign operation and translated at the closing rate.

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

Foreign exchange gains or losses arising from a monetary item receivable from or payable to a foreign operation, the settlement of which is neither planned nor likely to occur in the foreseeable future and which in substance is considered to form part of the net investment in the foreign operation, are recognized in other comprehensive income in the translation reserve.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, demand deposits, and short-term investments in highly liquid securities that are readily convertible to known amounts of cash with maturities of three months or less from the acquisition date and which are subject to an insignificant risk of changes in value. Equity investments are excluded from cash and cash equivalents.

Non-derivative financial assets

The Company recognizes and measures non-derivative financial assets by the following four categories: financial assets at fair value through profit or loss, held-to-maturity financial assets, loans and receivables and available-for-sale financial assets. The Company recognizes financial assets in the consolidated statement of financial position when the Company becomes a party to the contractual provisions of the instrument.

Upon initial recognition, non-derivative financial assets are measured at their 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 asset's acquisition or issuance.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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(a) Financial assets at fair value through profit or loss

Financial assets are classified at fair value through profit or loss if they are held for trading or designated as such upon initial recognition. Upon initial recognition, transaction costs are recognized in profit or loss when incurred. Financial assets at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss.

(b) Held-to-maturity financial assets

A non-derivative financial asset with a fixed or determinable payment and fixed maturity, for which the Company has the positive intention and ability to hold to maturity, is classified as held-to-maturity. Subsequent to initial recognition, held-to-maturity financial assets are measured at amortized cost using the effective interest rate method.

(c) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Subsequent to initial recognition, loans and receivables are measured at amortized cost using the effective interest method unless the effect of discounting is immaterial.

(d) Available-for-sale financial assets

Available-for-sale financial assets are those non-derivative financial assets that are designated as available-for-sale or are not classified as financial assets at fair value through profit or loss, held-to-maturity financial assets or loans and receivables. Subsequent to initial recognition, they are measured at fair value, with changes in fair value, net of any tax effect, recorded in other comprehensive income in equity. Investments in equity instruments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured and derivatives that are linked to and must be settled by delivery of such unquoted equity instruments are measured at cost. When a financial asset is derecognized or impairment losses are recognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss. Dividends on an available-for-sale equity instrument are recognized in profit or loss when the Company's right to receive payment is established.

(e) Derecognition of non-derivative financial assets

The Company derecognizes non-derivative financial assets when the contractual rights to the cash flows from the financial asset expire, or the Company transfers the rights to receive the contractual cash flows from the financial asset as well as substantially all the risks and rewards of ownership of the financial asset. Any interest in a transferred financial asset that is created or retained by the Company is recognized as a separate asset or liability.

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

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2017

(f) Offsetting a financial asset and a financial liability

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

Inventories

Inventory costs, except materials-in-transit in which costs are determined by using specific identification method, are determined by using the moving-weighted average method. The cost of inventories comprise all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition. The allocation of fixed production overheads to the costs of finished goods or work in progress are based on the normal capacity of the production facilities.

Inventories are measured at the lower of cost or net realizable value. The amount of any write-down of inventories to net realizable value and all losses of inventories are recognized as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories arising from an increase in net realizable value is recognized as a reduction in the amount of inventories recognized as a cost of goods sold in the period in which the reversal occurs.

The carrying amount of those inventories is recognized as cost of goods sold in the period in which the related revenue is recognized.

Non-current assets held for sale

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

The Company recognizes an impairment loss for any initial or subsequent write-down of an asset or disposal group to fair value less costs to sell, and a gain for any subsequent increase in fair value less costs to sell, up to the cumulative impairment loss previously recognized in accordance with K-IFRS No. 1036 "Impairment of Assets".

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

Investment property

Property held to earn rentals or for capital appreciation or both is classified as investment property. Investment property is measured initially at its cost. Transaction costs are included in the initial measurement. Subsequently, investment property is carried at depreciated cost less any accumulated impairment losses.

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

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

Property, plant and equipment

Property, plant and equipment are initially measured at cost and after initial recognition, are carried at cost less accumulated depreciation and any accumulated impairment losses. The cost of property, plant and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and, when the Company has an obligation to remove the asset or restore the site, an estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

The cost of replacing a part of an item is recognized in the carrying amount of the item of property, plant and equipment, if the following recognition criteria are met:

- (a) it is probable that future economic benefits associated with the item will flow to the Company, and
- (b) the cost can be measured reliably.

The carrying amount of the replaced part is derecognized at the time the replacement part is recognized. The costs of the day-to-day servicing of the item are recognized in profit or loss as incurred.

Items of property, plant and equipment are depreciated from the date they are available for use or, in respect of self-constructed assets, from the date that the asset is completed and ready for use. Other than land, the costs of an asset less its estimated residual value are depreciated. Depreciation of property, plant and equipment is recognized in profit or loss on a straight-line basis, which most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset, over the estimated useful lives of each component of an item of property, plant and equipment. Leased assets are depreciated over the shorter of the lease term and their useful lives unless it is reasonably certain that the Company will obtain ownership by the end of the lease term. Land is not depreciated.

Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item is depreciated separately.

The gain or loss arising from the derecognition of an item of property, plant and equipment is included in profit or loss when the item is derecognized.

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The estimated useful lives for the current and comparative periods are as follows:

Buildings	3-50 years
Structures	4-50 years
Machinery and equipment	4-25 years
Vehicles	3-20 years
Tools	3-10 years
Furniture and fixtures	3-20 years
Lease assets	3-30 years
Bearer plants	20 years

The estimated residual value, useful lives and the depreciation method are reviewed at least at the end of each reporting period and, if expectations differ from previous estimates, the changes are accounted for as changes in accounting estimates.

Borrowing costs

The Company capitalizes borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset as part of the cost of that asset. Other borrowing costs are recognized in expense as incurred. A qualifying asset is an asset that requires a substantial period of time to get ready for its intended use or sale. Financial assets and inventories that are manufactured or otherwise produced over a short period of time are not qualifying assets. Assets that are ready for their intended use or sale when acquired are not qualifying assets.

To the extent that the Company borrows funds specifically for the purpose of obtaining a qualifying asset, the Company determines the amount of borrowing costs eligible for capitalization as the actual borrowing costs incurred on that borrowing during the period less any investment income on the temporary investment of those borrowings. The Company immediately recognizes other borrowing costs as an expense. To the extent that the Company borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the Company shall determine the amount of borrowing costs eligible for capitalization by applying a capitalization rate to the expenditures on that asset. The capitalization rate shall be the weighted average of the borrowing costs applicable to the borrowings of the Company that are outstanding during the period, other than borrowings made specifically for the purpose of obtaining a qualifying asset. The amount of borrowing costs that the Company capitalizes during a period shall not exceed the amount of borrowing costs incurred during that period.

Intangible assets

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

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

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Intellectual property rights	4-25 years
Development costs	3-5 years
Port facilities usage rights	4-75 years
Other intangible assets	2-15 years

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

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

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

Exploration for and evaluation of mineral resources

POSCO is engaged in exploration projects for mineral resources through subsidiaries, associates and joint ventures or other contractual arrangements. Expenditures related to the development of mineral resources are recognized as exploration or development intangible assets. The nature of these intangible assets are as follows:

(a) Exploration and evaluation assets

Exploration and evaluation assets consist of expenditures for topographical studies, geophysical studies and trenching. These assets are reclassified as development assets when it is proved that the exploration has identified commercially viable mineral deposit.

(b) Development assets

When proved reserves are determined and development is sanctioned, development expenditures incurred are capitalized. These expenditures include evaluation of oil fields, construction of oil/gas wells, drilling for viability and others. On completion of development and inception of extraction for commercial production of developed proved reserves, the development assets are reclassified as either property, plant and equipment or as intellectual property rights (mining rights) under intangible assets based on the nature of the capitalized expenditure.

The respective property, plant and equipment and intellectual property (mining rights) are each depreciated and amortized based on proved reserves on a unit of production basis.

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Government grants

Government grants are not recognized unless there is reasonable assurance that the Company will comply with the grant's conditions and that the grant will be received.

(a) Grants related to assets

Government grants whose primary condition is that the Company purchase, construct or otherwise acquire long-term assets are deducted from the carrying amount of the assets and recognized in profit or loss on a systematic and rational basis over the life of the depreciable assets.

(b) Grants related to income

Government grants which are intended to compensate the Company for expenses incurred are deducted from the related expenses.

Leases

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

(a) Finance leases

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

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

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

(b) Operating leases

Lease obligations under operating leases are recognized as an expense on a straight-line basis over the lease term. Contingent rents are charged as expenses in the periods in which they are incurred.

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(c) Determining whether an arrangement contains a lease

Determining whether an arrangement is, or contains, a lease is based on the substance of the arrangement and requires an assessment of whether fulfillment of the arrangement is dependent on the use of a specific asset or assets (the asset) and the arrangement conveys a right to use the asset.

At inception or reassessment of the arrangement, management of the Company separates payments and other consideration required by such an arrangement into those for the lease and those for other elements on the basis of their relative fair values. If management of the Company concludes for a financial lease that it is impracticable to separate the payments reliably, the Company recognizes an asset and a liability at an amount equal to the fair value of the underlying asset that was identified as the subject of the lease. Subsequently, the liability shall be reduced as payments are made and an imputed finance charge on the liability recognized using the purchaser's incremental borrowing rate of interest.

Impairment for financial assets

A financial asset not carried at fair value through profit or loss is assessed at each reporting date to determine whether there is objective evidence that it is impaired. A financial asset is impaired if objective evidence indicates that a loss event has occurred after the initial recognition of the asset, and that the loss event had a negative effect on the estimated future cash flows of that asset that can be estimated reliably. However, losses expected as a result of future events, regardless of likelihood, are not recognized.

Objective evidence that a financial asset or group of financial assets are impaired includes:

- (a) significant financial difficulty of the issuer or obligor;
- (b) a breach of contract, such as a default or delinquency in interest or principal payments;
- (c) the lender, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider;
- (d) it becoming probable that the borrower will enter bankruptcy or other financial reorganization;
- (e) the disappearance of an active market for that financial asset because of financial difficulties; or
- (f) observable data indicating that there is a measurable decrease in the estimated future cash flows from a group of financial assets since the initial recognition of those assets, although the decrease cannot yet be identified with the individual financial assets in the group.

In addition, for an investment in an equity security, a significant or prolonged decline in its fair value below its cost is objective evidence of impairment.

If there is objective evidence that financial assets are impaired, impairment losses are measured and recognized.

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(a) Financial assets measured at amortized cost

An impairment loss in respect of a financial asset measured at amortized cost is calculated as the difference between its carrying amount and the present value of its estimated future cash flows discounted at the asset's original effective interest rate. If it is not practicable to obtain the instrument's estimated future cash flows, impairment losses would be measured by using prices from any observable current market transactions. The Company can recognize impairment losses directly or establish a provision to cover impairment losses. If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss shall be reversed either directly or by adjusting an allowance account.

(b) Financial assets carried at cost

If there is objective evidence that an impairment loss has occurred on an unquoted equity instrument that is not carried at fair value because its fair value cannot be reliably measured, or on a derivative asset that is linked to and must be settled by delivery of such an unquoted equity instrument, the amount of the impairment loss is measured as the difference between the carrying amount of the financial asset and the present value of estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment losses are not reversed.

(c) Available-for-sale financial assets

When a decline in the fair value of an available-for-sale financial asset has been recognized in other comprehensive income and there is objective evidence that the asset is impaired, the cumulative loss that had been recognized in other comprehensive income shall be reclassified from equity to profit or loss as a reclassification adjustment even though the financial asset has not been derecognized. Impairment losses recognized in profit or loss for an investment in an equity instrument classified as available-for-sale are not reversed through profit or loss. If, in a subsequent period, the fair value of a debt instrument classified as available-for-sale increases and the increase can be objectively related to an event occurring after the impairment loss was recognized in profit or loss, the impairment loss shall be reversed, with the amount of the reversal recognized in profit or loss.

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Impairment for non-financial assets

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

Management estimates the recoverable amount of an individual asset. If it is impossible to measure the individual recoverable amount of an asset, then management estimates the recoverable amount of cash-generating unit ("CGU"). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The Company determined that individual operating entities are CGUs.

The recoverable amount of an asset or CGU is the greater of its value-in-use and its fair value less costs to sell. The value-in-use is estimated by applying a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or CGU for which estimated future cash flows have not been adjusted, to the estimated future cash flows expected to be generated by the asset or CGU.

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

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

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Derivative financial instruments, including hedge accounting

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

(a) Hedge accounting

The Company holds forward exchange contracts, currency swaps and commodity future contracts to manage foreign exchange risk and commodity fair value risk. The Company designated derivatives as hedging instruments to hedge the risk of changes in the fair value of assets, liabilities or firm commitments (a fair value hedge) and foreign currency risk of highly probable forecasted transactions or firm commitments (a cash flow hedge).

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

① Fair value hedge

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

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

② Cash flow hedge

When a derivative is designated to hedge the variability in cash flows attributable to a particular risk associated with a recognized asset or liability or a highly probable forecasted transaction that could affect profit or loss, the effective portion of changes in the fair value of the derivative is recognized in other comprehensive income, net of tax, and presented in the hedging reserve in equity. Any ineffective portion of changes in the fair value of the derivative is recognized immediately in profit or loss.

If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated, exercised, or the designation is revoked, then hedge accounting is discontinued prospectively. The cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income is reclassified to profit or loss in the periods during which the forecasted transaction occurs. If the forecasted transaction is no longer expected to occur, then the balance in other comprehensive income is recognized immediately in profit or loss.

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(b) Embedded derivatives

Embedded derivatives are separated from the host contract and accounted for separately only if the following criteria have been met: (a) the economic characteristics and risks of the host contract and the embedded derivatives are not clearly and closely related to a separate instrument with the same terms as the embedded derivative that would meet the definition of a derivative, and (b) the hybrid (combined) instrument is not measured at fair value through profit or loss. Changes in the fair value of separable embedded derivatives from the host contract are recognized immediately in profit or loss. However, convertible rights of convertible bonds are not separated from the host contract and the compound financial instruments of bonds and convertible rights are designated and measured at fair value through profit and loss.

(c) Other derivatives

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

Non-derivative financial liabilities

The Company classifies non-derivative financial liabilities into financial liabilities at fair value through profit or loss or other financial liabilities in accordance with the substance of the contractual arrangement and the definitions of financial liabilities. The Company recognizes financial liabilities in the consolidated statement of financial position when the Company becomes a party to the contractual provisions of the financial liability.

(a) Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading or designated as such upon initial recognition. Subsequent to initial recognition, financial liabilities at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss. Upon initial recognition, transaction costs that are directly attributable to the acquisition are recognized in profit or loss as incurred.

(b) Other financial liabilities

Non-derivative financial liabilities other than financial liabilities at fair value through profit or loss are classified as other financial liabilities. At the date of initial recognition, other financial liabilities are measured at fair value minus transaction costs that are directly attributable to the acquisition. Subsequent to initial recognition, other financial liabilities are measured at amortized cost using the effective interest method. The Company derecognizes a financial liability from the consolidated statement of financial position when it is extinguished (i.e. when the obligation specified in the contract is discharged, cancelled or expires).

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Construction work in progress

The gross amount due from customers for contract work is presented for all contracts in which costs incurred plus recognized profits (less recognized losses) exceed progress billings. If progress billings exceed costs incurred plus recognized profits (less recognized losses), then the gross amount due to customers for contract work is presented. Cost includes all expenditures related directly to specific projects and an allocation of fixed and variable overheads incurred in the Company's contract activities based on normal operating capacity.

The Company recognizes advances received regarding the amount received from the ordering organization before the commencement of the construction. Also, the Company recognized trade accounts and notes receivable with respect to the amount billed to the ordering organization.

Employee benefits

(a) Short-term employee benefits

Short-term employee benefits are employee benefits that are due to be settled within twelve months after the end of the period in which the employees render the related service. When an employee has rendered service to the Company during an accounting period, the Company recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service as profit or loss. If the Company has a legal or constructive obligation which can be reliably measured, the Company recognizes the amount of expected payment for profit-sharing and bonuses payable as liabilities.

(b) Other long-term employee benefits

Other long-term employee benefits include employee benefits that are settled beyond 12 months after the end of the period in which the employees render the related service, and are calculated at the present value of the amount of future benefit that employees have earned in return for their service in the current and prior periods, less the fair value of any related assets. Any actuarial gains and losses are recognized in profit or loss in the period in which they arise.

(c) Retirement benefits: Defined contribution plans

For defined contribution plans, when an employee has rendered service to the Company during a period, the Company recognizes the contribution payable to a defined contribution plan in exchange for that service as an accrued expense, after deducting any contributions already paid. If the contributions already paid exceed the contribution due for service before the end of the reporting period, the Company recognizes that excess as an asset (prepaid expense) to the extent that the prepayment will lead to a reduction in future payments or a cash refund.

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(d) Retirement benefits: Defined benefit plans

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

The discount rate is the yield at the reporting date on corporate bonds that have maturity dates approximating the terms of the Company's obligations and that are denominated in the same currency in which the benefits are expected to be paid. The Company recognizes all actuarial gains and losses arising from actuarial assumption changes and experiential adjustments in other comprehensive income when incurred.

When the fair value of plan assets exceeds the present value of the defined benefit obligation, the Company recognizes an asset, to the extent of the present value of the total of cumulative any economic benefits available in the form of refunds from the plan or reduction in the future contributions to the plan.

Remeasurements of net defined benefit liabilities, which comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in other comprehensive income. The Company determines the net interest expense (income) on the net defined benefit liability (asset) for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the then-net defined benefit liability (asset), taking into account any changes in the net defined benefit liability (asset) during the period as a result of contributions and benefit payments, net interest expense and other expenses related to defined benefit plans are recognized in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss in curtailment is recognized immediately in profit or loss. The Company recognizes gains and losses on the settlement of a defined benefit plan when the settlement occurs.

Provisions

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

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

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

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

A provision for warranties is recognized when the underlying products are sold. The provision is based on historical warranty.

Regarding provision for construction warranties, warranty period starts from the completion of construction in accordance with construction contracts. If the Company has an obligation for warranties, provision for warranties which are estimated based on historical warranty data are recorded as cost of construction and provision for warranties during the construction period.

A provision for restoration regarding contamination of land is recognized in accordance with the Company's announced Environment Policy and legal requirement as needed.

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

Emission Rights

The Company accounts for greenhouse gases emission right and the relevant liability as follows pursuant to *the Act on Allocation and Trading of Greenhouse Gas Emission* which became effective in Korea in 2015.

(a) Greenhouse Gases Emission Right

Greenhouse Gases Emission Right consists of emission allowances which are allocated from the government free of charge and those purchased from the market. The cost includes any directly attributable costs incurred during the normal course of business.

Emission rights held for the purpose of performing the obligation are classified as intangible asset and initially measured at cost and subsequently carried at cost less accumulated impairment losses. Emission rights held for short-swing profits are classified as current asset and are measured at fair value with any changes in fair value recognized as profit or loss in the respective reporting period.

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The Company derecognizes an emission right asset when the emission allowance is unusable, disposed or submitted to government when the future economic benefits are no longer expected to be probable.

(b) Emission liability

Emission liability is a present obligation of submitting emission rights to the government with regard to emission of greenhouse gas. Emission liability is recognized when there is a high possibility of outflows of resources in performing the obligation and the costs required to perform the obligation are reliably estimable. Emission liability is an amount of estimated obligations for emission rights to be submitted to the government for the performing period. The emission liability is measured based on the expected quantity of emission for the performing period in excess of emission allowance in possession and the unit price for such emission rights in the market at the end of the reporting period.

Equity instruments

(a) Share capital

Common stock is classified as equity and the incremental costs arising directly attributable to the issuance of common stock less their tax effects are deducted from equity.

If the Company reacquires its own equity instruments, the amount of those instruments ("treasury shares") are presented as a contra equity account. No gain or loss is recognized in profit or loss on the purchase, sale, issuance or cancellation of its own equity instruments. When treasury shares are sold or reissued subsequently, the amount received is recognized as an increase to equity, and the resulting surplus or deficit on the transaction is recorded in capital surplus.

(b) Hybrid Bonds

Debt and equity instruments issued by the Company are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of financial liability and an equity instrument. When the Company has an unconditional right to avoid delivering cash or another financial asset to settle a contractual obligation, the instruments are classified as equity instruments.

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Revenue

Revenue from the sale of goods, services provided and the use of assets is measured at the fair value of the consideration received or receivable, net of returns and allowances, trade discounts and volume rebates, which are not significant for all periods presented.

(a) Sale of goods

Revenue from the sale of goods in the ordinary course of activities is measured at the fair value of the consideration received or receivable, net of returns, trade discounts and volume rebates. Revenue is recognized when persuasive evidence exists, usually in the form of an executed sales agreement, that the significant risks and rewards of ownership have been transferred to the buyer, recovery of the consideration is probable, the associated costs and possible return of goods can be estimated reliably, there is no continuing management involvement with the goods, and the amount of revenue can be measured reliably. The appropriate timing for transfer of risks and rewards varies depending on the individual terms and conditions of the sales contract. For international sales, this timing depends on the type of international commercial terms of the contract.

(b) Services rendered

Revenue from services rendered is recognized in profit or loss in proportion to the stage of completion of the transaction at the reporting date. The stage of completion is assessed by reference to surveys of work performed.

(c) Construction contracts

Construction contracts of the Company primarily consist of contracts for the construction of plants and commercial or residential buildings, and revenue recognition for different types of contracts is as follows:

When the outcome of a construction contract can be estimated reliably, contract revenue is recognized in profit or loss in proportion to the stage of completion of the contract. The stage of completion of a contract is determined based on the proportion that contract costs incurred for work performed to date bear to the estimated total contract costs. Contract revenue includes the initial amount agreed in the contract plus any variation in contract work, claims and incentive payments, to the extent that it is probable that they will result in revenue and can be measured reliably.

When the outcome of a construction contract cannot be estimated reliably, the revenue is recognized only to the extent of contract costs incurred that it is probable will be recoverable. An expected loss on the construction contract is recognized as an expense immediately.

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(d) Rental income

Rental income from investment property, net of lease incentives granted, is recognized in profit or loss on a straight-line basis over the term of the lease.

Finance income and finance costs

Finance income comprises interest income on funds invested (including available-for-sale financial assets), dividend income, gains on the disposal of available-for-sale financial assets, changes in the fair value of financial assets at fair value through profit or loss, and gains on valuations of hedging instruments that are recognized in profit or loss. Interest income is recognized as it accrues in profit or loss, using the effective interest rate method. Dividend income is recognized in profit or loss on the date that the Company's right to receive payment is established.

Finance costs comprise interest expense on borrowings and changes in the fair value of financial assets at fair value through profit or loss. Borrowing costs are recognized in profit or loss using the effective interest rate method.

Income taxes

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

The Company recognizes interest and penalties related to corporate income tax as if it is related to the income taxes, the Company applies K-IFRS No. 1012 "Income Taxes"; if it is not related to the income taxes, the Company applies K-IFRS No. 1037 "Provisions Contingent Liabilities and Contingent Assets".

(a) Current income tax

Current income tax is the expected income tax payable or receivable on the taxable profit or loss for the year, using tax rates enacted or substantively enacted at the end of the reporting period and any adjustment to tax payable in respect of previous years. The taxable profit is different from the accounting profit for the period since the taxable profit is calculated excluding the temporary differences, which will be taxable or deductible in determining taxable profit of future periods, and non-taxable or non-deductible items from the accounting profit.

(b) Deferred income tax

The measurement of deferred income tax liabilities and deferred tax assets reflects the tax consequences that would follow from the manner in which the Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

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The Company recognizes a deferred income tax liability for all taxable temporary differences associated with investments in subsidiaries, associates, and joint ventures, except to the extent that the Company is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The Company recognizes a deferred income tax asset for deductible temporary differences arising from investments in subsidiaries, associates and joint ventures, to the extent that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized. However, deferred income tax is not recognized for the following temporary differences: taxable temporary differences arising on the initial recognition of goodwill, or the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting profit or loss nor taxable income.

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

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

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

Earnings per share

Management calculates basic earnings per share ("EPS") data for POSCO's ordinary shares, which is presented at the end of the statement of comprehensive income. Basic EPS is calculated by dividing profit attributable to ordinary shareholders of POSCO by the weighted average number of ordinary shares outstanding during the period, adjusted for own shares held.

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Operating segments

An operating segment is a component of the Company that : a) engages in business activities from which it may earn revenues and incur expenditures, including revenues and expenses that relate to transactions with any of the Company's other components, b) whose operating results are regularly reviewed by the Company's chief operating decision maker ("CODM") to make decisions about resources to be allocated to the segment and assess its performance and for which discrete financial information is available. Management has determined that the CODM of the Company is the CEO.

Segment profit and loss is determined the same way that consolidated net after tax profit for the period is generally determined under K-IFRS without any adjustment for corporate allocations. The accounting policies used by each segment are consistent with the accounting policies used in the preparation of the consolidated financial statements. Segment assets and liabilities are generally measured based on total assets and liabilities in accordance with K-IFRS without any adjustment for corporate allocations. Also, segment assets and liabilities are based on the respective separate financial statements of the entities instead of on consolidated basis. In addition, there are varying levels of transactions amongst the reportable segments. These transactions include sales of property, plant and assets, and rendering of construction service and so on.

Segment results that are reported to the CEO include items directly attributable to a segment and items allocated on a reasonable basis. Segment capital expenditure is the total cost incurred during the period to acquire property, plant and equipment, and intangible assets other than goodwill.

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New standards and interpretations not yet adopted

The Company will apply K-IFRS No. 1109 “Financial Instruments” and K-IFRS No. 1115 “Revenue from Contracts with Customers” for the year beginning on January 1, 2018. The Company is evaluating analysis of financial impact resulting from adoption of new standards and the estimated effect on the consolidated financial statements at the date of initial application based on current situation as of December 31, 2017. However, a reasonable estimation of financial impact is not determined since the analysis of financial impact is not completed.

The following new standards, including K-IFRS No. 1109 and K-IFRS No. 1115, interpretations and amendments to existing standards have been published but are not mandatory for the Company for annual periods beginning on January 1, 2017, and the Company has not early adopted them.

(a) K-IFRS No. 1109 “Financial Instruments”

K-IFRS No. 1109 “Financial Instruments” regulates requirements for measurement and recognition of certain contracts in relation to trading financial assets and liabilities or non-financial items. It replaces existing guidance in K-IFRS No. 1039 “Financial Instruments: Recognition and Measurement”.

The standard will generally be applied retrospectively application with some exemptions allowing an entity not to restate the comparative information for prior periods in relation to classification and measurement (including impairment) changes. Such exemptions will be applied by the Company. The Company will recognize the accumulated effect resulting from initial application of K-IFRS No. 1109 as reserves, retained earnings and non-controlling interests of the Company at the date of initial application.

The standard’s impact on the consolidated financial statements are as follows.

1) Classification and measurement of financial assets

When applying K-IFRS No. 1109, the classification of financial assets will be driven by the Company’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.

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Notes to the Consolidated Financial Statements, Continued
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<u>Business model</u>	<u>Contractual cash flows are solely payments of principal and interests</u>	<u>All other cases</u>
To collect contractual cash flows	Amortized cost(*1)	
Both to collect contractual cash flows and sell financial assets	Fair value through other comprehensive income(*1)	Fair value through profit or loss(*2)
For trading, and others	Fair value through profit or loss	

(*1) The Company may irrevocably designate as at fair value through profit or loss to eliminate or significantly reduce an accounting mismatch.

(*2) The Company may irrevocably designate equity investments that is not held for trading as at fair value through other comprehensive income.

As of December 31, 2017, the Company owns financial asset at fair value through profit or loss of ₩67,021 million, available-for-sale financial assets of ₩1,978,115 million, financial assets held-to-maturity of ₩5,211 million, and loans and receivables of ₩21,394,092 million.

As a result of analysis of the impact on the consolidated financial statements, the Company expects that debt instruments whose contractual cash flows do not solely represent payments of principal and interest and those held for trading will be measured at fair value through profit or loss; loans and receivables whose contractual cash flows solely represent receipt of principal and interest but are not owned for the purpose of collection of contractual cash flows will be measured at fair value through other comprehensive income or fair value through profit or loss. Accordingly, the financial assets at fair value through profit or loss may increase upon adoption of K-IFRS No. 1109 and may increase the volatility in profit or loss. The Company expects the application of K-IFRS No. 1109 on these financial assets will not have a material impact on the consolidated financial statements.

According to K-IFRS No. 1109, the Company may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value of an investment in an equity instrument which is not held for trading at initial recognition. As of December 31, 2017, the Company owns equity instruments classified as financial assets available-for-sale for the purpose of long-term strategic plan and the fair value of the accompanying asset is ₩1,730,753 million. According to K-IFRS No. 1109, the Company made an irrevocable election to classify the equity instrument as assets measured at fair value through other comprehensive income, for which all subsequent changes in fair value are recognized in other comprehensive income and not subsequently recycled to profit or loss.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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2) Impairment: Financial Assets and Contract Assets

K-IFRS No. 1109 replaces the incurred loss model in the existing standard with a forward-looking expected credit loss model for debt instruments, lease receivables, contractual assets, loan commitments, and financial guarantee contracts.

Under K-IFRS No. 1109, impairment losses are likely to be recognized earlier than using the incurred loss model under the existing guidance in K-IFRS No. 1039 as loss allowances will be measured either 12-month or lifetime expected credit loss based on the extent of increase in credit risk.

If credit risk has increased significantly since the initial recognition, a loss allowance for lifetime expected credit loss is required to be measured at the end of every reporting period. If credit risk has not increased significantly since the initial recognition, a loss allowance is measured based on 12-month expected credit loss.

If the financial instrument has low credit risk at the end of the reporting period, the Company may assume that the credit risk has not increased significantly since initial recognition. However, a loss allowance for lifetime expected credit losses is required for contract assets or trade receivables that do not contain a significant financing component. Additionally, the Company has elected to recognize lifetime expected credit losses for contract assets or trade receivables that contain a significant financing component.

The Company expects impairment losses of financial assets subject to expected credit loss model under K-IFRS No. 1109 to be recognized earlier. As of January 1, 2018, the date of initial application, the Company expects recognize increase in loss allowance, and decrease in retained earnings and non-controlling interests.

3) Classification and Measurement of Financial Liabilities

K-IFRS No. 1109 mostly adheres to the existing requirements under K-IFRS No. 1039 regarding to classification of financial liabilities.

Under K-IFRS No. 1039, all financial liabilities designated at fair value through profit or loss recognized their fair value movements in profit or loss. However, K-IFRS No. 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. Amounts presented in other comprehensive income are not subsequently transferred to profit or loss.

The Company did not designate financial liabilities as financial liability at fair value through profit or loss as of December 31, 2017 and expects the adoption of K-IFRS No. 1109 will not have significant impact on the classification of financial liabilities.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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4) Hedge Accounting

Regarding the initial application of K-IFRS No. 1109, the Company may choose as its accounting policy choice to continue to apply all of the hedge accounting requirements of K-IFRS No. 1039 instead of the requirements of K-IFRS No. 1109. The Company determined to consistently apply hedge accounting requirements of K-IFRS No. 1039.

(b) K-IFRS No. 1115 "Revenue from Contracts with Customers"

K-IFRS No. 1115 "Revenue from Contracts with Customers" provides a unified five-step model for determining the timing, measurement and recognition of revenue. It replaces existing revenue recognition guidance, including K-IFRS No. 1018 "Revenue", K-IFRS No. 1011 "Construction Contracts", K-IFRS No. 2031 "Revenue- Barter transactions involving advertising services", K-IFRS No. 2113 "Customer Loyalty Programs", K-IFRS No. 2115 "Agreements for the construction of real estate", and K-IFRS No. 2118 "Transfers of assets from customers".

The Company intends to apply the retrospective approach which will recognize the cumulative impact of initially applying the revenue standard as of January 1, 2018, the date of initial application and the Company also decided to apply the practical expedients as allowed by K-IFRS No. 1115 by applying the new standard only to those contracts that are not considered as completed contracts at the date of initial application. Accordingly, upon adoption of K-IFRS No. 1115, the Company will not restate the financial statements for comparative periods.

Existing K-IFRS standards and interpretations including K-IFRS No. 1018 provide revenue recognition guidance by transaction types such as sales of goods, rendering of services, interest income, royalty income, dividend income and construction revenue; however, under the new standard, K-IFRS No. 1115, the five-step approach (Step 1: Identify the contract(s) with a customer, Step 2: Identify the performance obligations in the contract, Step 3: Determine the transaction price, Step 4: Allocate the transaction price to the performance obligations in the contract, Step 5: Recognize revenue when the entity satisfied a performance obligation) is applied for all types of contracts or agreements.

The standard's impact on the consolidated financial statements are as follows.

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Notes to the Consolidated Financial Statements, Continued
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1) Identification of performance obligations

The Company holds certain contracts for sales of manufactured product and merchandise which include transport service. When applying K-IFRS No. 1115, sales of manufactured products or merchandise and delivery of products (i.e. shipping service) are identified as separate performance obligations in the contracts with customers. For transactions for which the shipping terms are on shipment basis and the customer pays shipping costs, the two performance obligations are separately accounted for because delivery of products is performed after the control over the products is transferred to the customer. The transaction price allocated to the performance obligation of delivery service will be recognized when the obligation of delivery of the product is completed.

The Company identified transport service included in the sales contract as a separate performance obligation that will be satisfied over the promised service period. As of January 1, 2018, the date of initial application, change in relevant accounting policy is expected to result in decrease in retained earnings and non-controlling interests.

Certain construction contracts of the Company includes design, purchase and construction services through separate service contracts. According to K-IFRS No. 1115, if service or goods provided by the Company are highly dependent or correlated, the Company should identify them as a single performance obligation regardless of the number of contracts made.

The Company considered each service contract as a combined single obligation and therefore, upon adoption of K-IFRS No. 1115 as of January 1, 2018, the date of initial application, the Company expects to have increases in retained earnings and non-controlling interests.

2) Variable consideration

Under K-IFRS No. 1115, the Company estimates the amount of variable consideration by using the expected value which the Company expects to better predict the amount of consideration. The Company recognizes revenue with transaction price including variable consideration only to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the refund period has lapsed.

In certain sales arrangements, unit price is subject to adjustment due to quality of products. A certain percentage of sales discount is also provided in case customers make payment before the settlement due date. In addition, certain service contracts are subject to compensation payment if the Company fails to achieve a promised level of obligation.

As of January 1, 2018, the date of initial application, changes in accounting policy due to K-IFRS No. 1115 are expected to result in decreases in retained earnings and non-controlling interests.

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Notes to the Consolidated Financial Statements, Continued
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3) Performance obligation satisfied over time

In accordance with K-IFRS No. 1115, revenue is recognized over time by measuring progress only if the Company's performance does not create an asset with an alternative use to the Company and the Company has an enforceable right to payment for performance completed to date.

To date, the Company is still in the process of evaluating whether certain service contracts including construction service of which the Company is in charge have an enforceable right to payment for performance completed to date and relevant analysis are expected to be completed during the three-month period ended March 31, 2018.

According to K-IFRS No. 1115, the effects of any inputs that do not depict the transfer of control of goods or services to the customer such as the costs of wasted materials, labor or other resources to fulfil the contract that were not reflected in the price of the contract should be excluded from calculating percentage of completion. As of January 1, 2018, the date of initial application, change in percentage of completion due to excessive use of materials is expected to result in decreases in retained earnings and non-controlling interests.

4) Incremental costs of obtaining a contract

In accordance with K-IFRS No. 1115, the Company recognizes as an asset the incremental costs of obtaining a contract with a customer if the Company expects to recover those costs, and costs that are recognized as assets are amortized over the period that the related goods or services are transferred to the customer. The Company should expense costs incurred with no relation to obtaining a contract unless the Company has enforceable right to require payment from the customer.

Costs incurred in construction contract have no relation to obtaining a contract and therefore, should be expensed immediately. As of January 1, 2018, the date of initial application, change in accounting policy regarding incremental costs of obtaining a contract is expected to result in decreases in retained earnings and non-controlling interests.

5) Considerations payable to a customer

In accordance with K-IFRS No. 1115, considerations payable to a customer should be deducted from the amount of revenue earned unless payment is made in relation to goods or service provided by the customer as a separable performance obligation.

Under certain construction contracts, the Company is obligated to make payment for the customer's interest expense or moving charges. The Company assessed those considerations payable to a customer is not made in relation to goods or service provided by the customer as a separable performance obligation. As of January 1, 2018, the date of initial application, change in accounting policy regarding considerations payable to a customer is expected to result in increases in retained earnings and non-controlling interests.

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(c) K-IFRS No. 1116 "Leases"

K-IFRS No. 1116 "Leases" will replace K-IFRS No. 1017 "Leases" and K-IFRS No. 2104 "Determining whether an Arrangement contains a Lease". It is effective for annual periods beginning on or after January 1, 2019, with early adoption permitted for a Company which has adopted K-IFRS No. 1115.

As a lessee, the Company shall apply this standard using one of the following two methods; (a) retrospectively to each prior reporting period presented in accordance with K-IFRS No. 1008 "Accounting Policies, Changes in Accounting Estimates and Errors" but using the practical expedients for completed contracts- i.e. completed contracts as of the beginning of the earliest prior period presented are not restated; or (b) retrospectively with the cumulative effect of initially applying this standard recognized at the date of initial application.

K-IFRS No. 1116 suggests a single accounting model that requires a lessee to recognize lease related asset and liability in the consolidated financial statements. 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 of which has a term of 12 months or less at the commencement date and low value assets. Accounting treatment for lessor is similar to the existing standard which classifies lease into finance and operating lease.

Application of K-IFRS No. 1116 will change current operating lease expense which has been recognized in straight-line method into depreciation expense of right-of-use asset and interest expense of lease liability, and therefore, nature of expense recognized in relation to lease will change. However, it is expected that there will be no significant impact on finance lease.

The Company has not yet initiated to prepare for the application of K-IFRS No. 1116 and the Company has not performed an assessment of the impact resulting from the application of K-IFRS No. 1116. The Company will complete the analysis of financial impacts arising from applying this standard in 2018.

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4. Financial risk management

The Company has exposure to the following risks from its use of financial instruments:

- credit risk
- liquidity risk
- market risk
- capital risk

This note presents information about the Company's exposure to each of the above risks, the Company's objectives, policies and processes for measuring and managing risk, and the Company's management of capital. Further quantitative disclosures are included throughout these consolidated financial statements.

(a) Financial risk management

1) Risk management framework

The Board of Directors has overall responsibility for the establishment and oversight of the Company's risk management framework. The Company's risk management policies are established to identify and analyze the risks faced by the Company, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Company's activities.

The Company, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

2) Credit risk

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

The Company implements a credit risk management policy under which the Company only transacts business with counterparties that have a certain level of credit rate evaluated based on financial condition, historical experience, and other factors. The Company's exposure to credit risk is influenced mainly by the individual characteristics of each customer. The default risk of a nation or an industry in which a customer operates its business does not have a significant influence on credit risk. The Company has established a credit policy under which each new customer is analyzed individually for creditworthiness.

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The Company establishes an allowance for impairment that represents its estimate of incurred losses in respect of trade and other receivables. The main components of this allowance are a specific loss component that relates to individually significant exposures, and a collective loss component established for companies of similar assets in respect of losses that have been incurred but not yet identified. The collective loss allowance is determined based on historical data of payment statistics for similar financial assets. Debt securities are analyzed individually, and an expected loss shall be directly deducted from debt securities.

Credit risk also arises from transactions with financial institutions, and such transactions include transactions of cash and cash equivalents, various deposits, and financial instruments such as derivative contracts. The Company manages its exposure to this credit risk by only entering into transactions with banks that have high international credit ratings. The Company's treasury department authorizes, manages, and oversees new transactions with financial institutions with whom the Company has no previous relationship.

Furthermore, the Company limits its exposure to credit risk of financial guarantee contracts by strictly evaluating their necessity based on internal decision making processes, such as the approval of the board of directors.

3) Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Company's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Company's reputation.

The Company's cash flow from business, borrowing or financing is sufficient to meet the cash requirements for the Company's strategic investments. Management believes that the Company is capable of raising funds by borrowing or financing if the Company is not able to generate cash flow requirements from its operations. The Company has committed borrowing facilities with various banks.

4) Market risk

Market risk means that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. The goal of market risk management is optimization of profit and controlling the exposure to market risk within acceptable limits.

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① Currency risk

The Company's policy in respect of foreign currency risks is a natural hedge whereby foreign currency income is offset with foreign currency expenditures. The remaining net exposures after the natural hedge have been hedged using derivative contracts such as forward exchange contracts. In addition, the Company's derivative transactions are limited to hedging actual foreign currency transactions and speculative hedging is not permitted. Based on this policy, the Company has performed currency risk management specific to various characteristics of different segments. The entities in the steel segment reduces the foreign currency exposure by repayment of foreign currency borrowings subjected to investment in overseas when its maturities come. The entities in the engineering and construction segment have hedged foreign currency risks by using forward exchange contracts. Entities in the trading segment have hedged foreign currency risks by using forward exchange contracts when the foreign currencies received and paid are different.

② Interest rate risk

The Company manages the exposure to interest rate risk by adjusting of borrowing structure ratio between borrowings at fixed interest rates and variable interest rate. The Company monitors interest rate risks regularly in order to avoid exposure to interest rate risk on borrowings at variable interest rate.

③ Other market price risk

Equity price risk arises from listed equity securities among available-for-sale equity securities. Management of the Company measures regularly the fair value of listed equity securities and the risk of variance in future cash flow caused by market price fluctuations. Significant investments are managed separately and all buy and sell decisions are approved by management of the Company.

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Notes to the Consolidated Financial Statements, Continued
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(b) Management of capital

The fundamental goal of capital management is the maximization of shareholders' value by means of the stable dividend policy and the retirement of treasury shares. The capital structure of the Company consists of equity and net borrowings (after deducting cash and cash equivalents) and current financial instruments from borrowings. The Company applied the same capital risk management strategy that was applied in the previous period.

Net borrowing-to-equity ratio as of December 31, 2017 and 2016 is as follows:

<i>(in millions of Won)</i>		2017	2016
Total borrowings	₩	21,063,657	22,704,998
Less: Cash and cash equivalents		2,612,530	2,447,619
Net borrowings		18,451,127	20,257,379
Total equity		47,464,008	45,838,394
Net borrowings-to-equity ratio		38.87%	44.19%

5. Cash and Cash Equivalents

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

<i>(in millions of Won)</i>		2017	2016
Cash	₩	1,896	11,960
Demand deposits and checking accounts		1,259,813	1,312,426
Time deposits		360,985	254,888
Other cash equivalents		989,836	868,345
	₩	2,612,530	2,447,619

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6. Trade Accounts and Notes Receivable

(a) Trade accounts and notes receivable as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>		2017	2016
Current			
Trade accounts and notes receivable	₩	8,583,311	9,329,799
Finance lease receivables		10,469	10,300
Due from customers for contract work		850,301	964,304
Less: Allowance for doubtful accounts		(493,533)	(517,476)
	₩	<u>8,950,548</u>	<u>9,786,927</u>
Non-current			
Trade accounts and notes receivable	₩	871,432	80,447
Finance lease receivables		734	11,326
Less: Allowance for doubtful accounts		(140,596)	(40,649)
	₩	<u>731,570</u>	<u>51,124</u>

Trade accounts and notes receivable sold to financial institutions, for which the derecognition conditions were not met, amounted to ₩309,964 million and ₩344,410 million as of December 31, 2017 and 2016, respectively. The fair value of trade accounts and notes receivable approximates the carrying amounts and trade accounts and notes receivable are included in short-term borrowings from financial institutions (Note 17).

(b) Finance lease receivables are as follows:

<i>(in millions of Won)</i>		2017	2016
Customer	Contents		
Korea Electric Power Corporation	Combined thermal power plant #3~4	₩ 10,469	20,648
KC Chemicals CORP	Machinery and equipment	-	244
Hystech.Co. Ltd.	Machinery and equipment	734	734
		₩ <u>11,203</u>	<u>21,626</u>

(c) The gross amount and present value of minimum lease payments as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>		2017	2016
Less than 1 year	₩	11,771	13,114
1 year - 5 years		828	12,547
Unrealized interest income		(1,396)	(4,035)
Present value of minimum lease payment	₩	<u>11,203</u>	<u>21,626</u>

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7. Other Receivables

Other receivables as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

		<u>2017</u>	<u>2016</u>
Current			
Loans	₩	617,696	421,818
Other accounts receivable		960,543	1,131,492
Accrued income		179,971	139,618
Deposits		107,137	93,891
Others		18,925	13,606
Less: Allowance for doubtful accounts		(248,266)	(260,683)
	₩	<u>1,636,006</u>	<u>1,539,742</u>
Non-current			
Loans	₩	874,158	733,974
Other accounts receivable		92,939	81,938
Accrued income		1,663	1,746
Deposits		122,485	104,217
Less: Allowance for doubtful accounts		(212,069)	(158,963)
	₩	<u>879,176</u>	<u>762,912</u>

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8. Other Financial Assets

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

(in millions of Won)

	<u>2017</u>	<u>2016</u>
Current		
Derivatives assets held for trading	₩ 63,912	49,281
Financial assets held for trading	1,970	-
Available-for-sale securities (bonds)	136,141	2,952
Current portion of held-to-maturity securities	421	422
Short-term financial instruments(*1,2)	<u>6,843,436</u>	<u>5,172,256</u>
	<u>₩ 7,045,880</u>	<u>5,224,911</u>
Non-current		
Derivatives assets held for trading	₩ 4,378	98,301
Available-for-sale securities (equity instruments)(*3,4)	1,730,753	2,392,534
Available-for-sale securities (bonds)	54,439	46,330
Available-for-sale securities (others)	56,782	73,108
Held-to-maturity securities	4,790	2,048
Long-term financial instruments(*2)	<u>60,542</u>	<u>45,371</u>
	<u>₩ 1,911,684</u>	<u>2,657,692</u>

(*1) As of December 31, 2017 and 2016, ₩10,080 million and ₩6,813 million, respectively, are restricted for the use in a government project.

(*2) As of December 31, 2017 and 2016, financial instruments amounting to ₩78,477 million and ₩82,008 million, respectively, are restricted for use in financial arrangements, pledge and others.

(*3) During the year ended December 31, 2017, there were objective evidences of impairment for listed equity securities such as FINE BESTEEL CO., LTD and others due to the significant or prolonged decline in the fair value below cost of the shares and for non-listed equity securities such as Congonhas Minerios S.A. and others. As a result, an impairment loss of ₩123,214 million was recognized in profit or loss for the year ended December 31, 2017.

(*4) As of December 31, 2017 and 2016, ₩136,099 million and ₩123,220 million of available-for-sale securities, respectively, have been provided as collateral for borrowings, construction projects and others.

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Notes to the Consolidated Financial Statements, Continued
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9. Inventories

(a) Inventories as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>		2017	2016
Finished goods	₩	1,526,628	1,200,344
Merchandise		930,558	851,325
Semi-finished goods		1,721,130	1,552,988
Raw materials		2,329,268	1,939,539
Fuel and materials		808,016	817,397
Construction inventories		849,266	990,941
Materials-in-transit		1,818,576	1,807,816
Others		103,144	94,535
		<u>10,086,586</u>	<u>9,254,885</u>
Less: Allowance for inventories valuation		(135,631)	(203,164)
	₩	<u>9,950,955</u>	<u>9,051,721</u>

(b) The changes of allowance for inventories valuation for the years ended December 31, 2017 and 2016 were as follows:

<i>(in millions of Won)</i>		2017	2016
Beginning	₩	203,164	231,378
Loss on valuation of inventories		78,560	152,249
Utilization on sale of inventories		(138,967)	(161,458)
Others		(7,126)	(19,005)
Ending	₩	<u>135,631</u>	<u>203,164</u>

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

10. Assets Held for Sale

Details of assets held for sale and related liabilities as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	2017			2016		
	Controlling company	Subsidiaries (*1)	Total	Controlling company	Subsidiaries (*2)	Total
Assets						
Property, plant and equipment	392	71,340	71,732	764	305,864	306,628
Others	-	36	36	-	5,330	5,330
	<u>₩ 392</u>	<u>71,376</u>	<u>71,768</u>	<u>764</u>	<u>311,194</u>	<u>311,958</u>

(*1) During the year ended December 2017, POSCO ENGINEERING & CONSTRUCTION CO., LTD., a subsidiary of the Company, determined to dispose of the office building, Seomyeon Fiesta, in Busan and classified the related property, plant and equipment amounting to ₩71,340 million as assets held for sale.

(*2) During the year ended December 2016, Posco e&c Songdo International Building, a subsidiary of the Company, entered into a sales contract regarding disposal of the office building of POSCO ENGINEERING & CONSTRUCTION CO., LTD. in Songdo and classified the accompanying property, plant and equipment as assets held for sale. During the year ended December 2017, disposal of the accompanying assets held for sale was completed.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

11. Investments in Associates and Joint ventures

(a) Investments in associates and joint ventures as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

		2017	2016
Investments in associates	₩	1,520,441	1,595,441
Investments in joint ventures		<u>2,037,491</u>	<u>2,286,948</u>
	₩	<u><u>3,557,932</u></u>	<u><u>3,882,389</u></u>

(b) Details of investments in associates as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

Company	2017			2016	
	Number of shares	Ownership (%)	Acquisition cost	Book value	Book value
[Domestic]					
EQP POSCO Global NO1 Natural Resources PEF	178,713,975,892	31.14	₩ 178,787	₩ 175,553	175,690
SNNC	18,130,000	49.00	90,650	110,424	107,859
QSONE Co.,Ltd.	200,000	50.00	84,395	85,049	84,799
Chun-cheon Energy Co., Ltd.(*1)	16,098,143	45.67	80,491	74,378	45,077
Incheon-Gimpo Expressway Co., Ltd.(*1)	9,032,539	18.26	45,163	31,660	37,372
BLUE OCEAN Private Equity Fund	333	27.52	33,300	19,620	35,752
CHUNGJU ENTERPRISE CITY DEVELOPMENT Co.,Ltd	2,008,000	29.53	10,040	17,252	12,551
UITrans LRT Co., Ltd.(*1)	7,714,380	38.19	38,572	15,841	17,851
Daesung Steel	108,038	17.54	14,000	15,500	12,302
Keystone NO. 1. Private Equity Fund	13,800,000	40.45	13,800	12,379	13,314
KoFC POSCO HANWHA KB Shared Growth NO. 2. Private Equity Fund	6,485	12.50	6,485	6,828	11,890
KONES, Corp.	3,250,000	41.67	6,893	2,827	5,641
Others (35 companies)(*1)				<u>67,325</u>	<u>55,061</u>
				<u>634,636</u>	<u>615,159</u>
[Foreign]					
South-East Asia Gas Pipeline Company Ltd.	135,219,000	25.04	150,779	197,069	215,996
AES-VCM Mong Duong Power Company Limited(*2)	-	30.00	164,303	142,348	167,141
7623704 Canada Inc.	114,452,000	10.40	124,341	121,702	137,512
Eureka Moly LLC	-	20.00	240,123	79,398	89,601
AMCI (WA) PTY LTD	49	49.00	209,664	63,378	70,501
Nickel Mining Company SAS	3,234,698	49.00	157,585	45,905	45,138
NCR LLC	-	29.41	37,634	33,738	36,738
KOREA LNG LTD.	2,400	20.00	135,205	33,422	63,058
PT. Batutua Tembaga Raya	128,285	22.00	21,824	21,823	22,723
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	10,200,000	34.00	9,517	15,617	18,008
PT. Wampu Electric Power(*1)	8,708,400	20.00	10,054	13,391	8,706
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	50	25.00	4,723	6,517	6,840
Others (26 companies)(*1)				<u>111,497</u>	<u>98,320</u>
				<u>885,805</u>	<u>980,282</u>
			₩	<u>1,520,441</u>	<u>1,595,441</u>

(*1) As of December 31, 2017 and 2016, investments in associates amounting to ₩158,370 million and ₩124,963 million, respectively, are provided as collateral in relation to the associates' borrowings.

(*2) As of December 31, 2017 and 2016, shares of PSC Energy Global Co., Ltd., a subsidiary of the Company, are provided as collateral in relation to the associates' borrowings.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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(c) Details of investments in joint ventures as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>	Company	2017			2016	
		Number of shares	Ownership (%)	Acquisition cost	Book value	Book value
	[Domestic]					
	POSCO MITSUBISHI CARBON TECHNOLOGY	11,568,000	60.00	₩ 115,680	₩ 110,760	83,113
	Others (5 companies)				6,094	-
					<u>116,854</u>	<u>83,113</u>
	[Foreign]					
	Roy Hill Holdings Pty Ltd(*1)	13,117,972	12.50	1,528,672	1,125,133	1,186,859
	POSCO-NPS Niobium LLC	325,050,000	50.00	364,609	348,836	393,570
	CSP - Compania Siderurgica do Pecem	1,108,696,532	20.00	558,821	146,427	330,463
	KOBRASCO	2,010,719,185	50.00	32,950	108,485	88,308
	BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	-	25.00	61,961	88,305	97,369
	DMSA/AMSA(*1)	-	4.00	304,623	56,735	74,935
	Others (14 companies)				46,716	32,331
					<u>1,920,637</u>	<u>2,203,835</u>
					<u>₩ 2,037,491</u>	<u>2,286,948</u>

(*1) As of December 31, 2017 and 2016, the investments in joint ventures were provided as collateral in relation to the joint ventures' borrowings.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

(d) The movements of investments in associates and joint ventures for the years ended December 31, 2017 and 2016 were as follows:

1) For the year ended December 31, 2017

(in millions of Won)

Company	December 31, 2016		Dividends	Share of profits (losses)	Other increase (decrease)(*1)	December 31, 2017
	Book value	Acquisition				Book value
[Domestic]						
EQP POSCO Global NO1 Natural Resources PEF ₩	175,690	-	-	418	(555)	175,553
SNNC	107,859	-	-	2,370	195	110,424
QSONE Co.,Ltd.	84,799	-	(368)	618	-	85,049
Chun-cheon Energy Co., Ltd	45,077	27,791	-	1,510	-	74,378
Incheon-Gimpo Expressway Co., Ltd.	37,372	-	-	(6,463)	751	31,660
BLUE OCEAN Private Equity Fund	35,752	-	-	(8,154)	(7,978)	19,620
CHUNGJU ENTERPRISE CITY DEVELOPMENT Co.,Ltd	12,551	-	-	4,701	-	17,252
UITrans LRT Co., Ltd.	17,851	-	-	(2,010)	-	15,841
Daesung Steel	12,302	-	-	3,198	-	15,500
Keystone NO. 1. Private Equity Fund	13,314	-	-	(886)	(49)	12,379
KoFC POSCO HANWHA KB Shared Growth NO. 2. Private Equity Fund	11,890	-	-	(197)	(4,865)	6,828
KONES, Corp.	5,641	-	-	(2,774)	(40)	2,827
POSCO MITSUBISHI CARBON TECHNOLOGY	83,113	-	-	27,582	65	110,760
Others (40 companies)	55,061	28,348	(137)	(7,995)	(1,858)	73,419
	<u>698,272</u>	<u>56,139</u>	<u>(505)</u>	<u>11,918</u>	<u>(14,334)</u>	<u>751,490</u>
[Foreign]						
South-East Asia Gas Pipeline Company Ltd.	215,996	-	(37,016)	42,896	(24,807)	197,069
AES-VCM Mong Duong Power Company Limited	167,141	-	(30,798)	19,644	(13,639)	142,348
7623704 Canada Inc.	137,512	-	(7,563)	7,468	(15,715)	121,702
Eureka Moly LLC	89,601	-	-	(35)	(10,168)	79,398
AMCI (WA) PTY LTD.	70,501	-	-	(4,299)	(2,824)	63,378
Nickel Mining Company SAS	45,138	-	-	424	343	45,905
NCR LLC	36,738	276	-	(60)	(3,216)	33,738
KOREA LNG LTD.	63,058	-	(6,466)	(70,180)	47,010	33,422
PT. Batutua Tembaga Raya	22,723	-	-	260	(1,160)	21,823
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	18,008	-	-	(1,268)	(1,123)	15,617
PT. Wampu Electric Power	8,706	-	-	5,927	(1,242)	13,391
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	6,840	-	-	303	(626)	6,517
Roy Hill Holdings Pty Ltd.	1,186,859	-	-	46,020	(107,746)	1,125,133
POSCO-NPS Niobium LLC	393,570	-	(17,277)	17,173	(44,630)	348,836
CSP - Companhia Siderurgica do Pecem	330,463	-	-	(147,847)	(36,189)	146,427
KOBRASCO	88,308	-	(22,135)	56,445	(14,133)	108,485
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	97,369	-	(5,542)	1,555	(5,077)	88,305
DMSA/AMSA	74,935	13,712	-	(22,339)	(9,573)	56,735
Others (40 companies)	130,651	22,209	(4,408)	46,535	(36,774)	158,213
	<u>3,184,117</u>	<u>36,197</u>	<u>(131,205)</u>	<u>(1,378)</u>	<u>(281,289)</u>	<u>2,806,442</u>
₩	<u>3,882,389</u>	<u>92,336</u>	<u>(131,710)</u>	<u>10,540</u>	<u>(295,623)</u>	<u>3,557,932</u>

(*1) Other increase or decrease represents the changes in investments in associates and joint ventures due to disposals, change in capital adjustments effect from translations of financial statements of foreign investees and others.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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2) For the year ended December 31, 2016

(in millions of Won)

Company	December 31, 2015		Dividends	Share of profits (losses)	Other increase (decrease)(*1)	December 31,
	Book value	Acquisition				2016 Book value
[Domestic]						
EQP POSCO Global NO1 Natural Resources PEF ₩	175,676	222	-	(399)	191	175,690
SNNC	111,326	-	-	(3,417)	(50)	107,859
QSONE Co.,Ltd.	83,919	-	-	880	-	84,799
Chun-cheon Energy Co., Ltd	30,420	19,832	-	(5,175)	-	45,077
Incheon-Gimpo Expressway Co., Ltd.	39,447	-	-	(2,758)	683	37,372
BLUE OCEAN Private Equity Fund	35,437	-	-	643	(328)	35,752
CHUNGJU ENTERPRISE CITY DEVELOPMENT Co.,Ltd	12,265	-	-	286	-	12,551
UITrans LRT Co., Ltd.	40,903	6,817	-	(29,825)	(44)	17,851
Daesung Steel	14,000	-	-	(2,272)	574	12,302
Keystone NO. 1. Private Equity Fund	13,015	-	-	281	18	13,314
KoFC POSCO HANWHA KB Shared Growth NO. 2. Private Equity Fund	14,829	1,875	-	1,186	(6,000)	11,890
KONES, Corp.	5,775	-	-	(256)	122	5,641
POSCO MITSUBISHI CARBON TECHNOLOGY	104,970	-	-	(21,929)	72	83,113
POSCO PLANTEC Co., Ltd.	171,218	-	-	(171,927)	709	-
SeAH Changwon Integrated Special Steel	165,754	-	-	4,797	(170,551)	-
POSCO ES MATERIALS CO.,LTD	38,447	-	-	(2,061)	(36,386)	-
Others (33 companies)	33,933	20,061	(200)	(2,802)	4,069	55,061
	<u>1,091,334</u>	<u>48,807</u>	<u>(200)</u>	<u>(234,748)</u>	<u>(206,921)</u>	<u>698,272</u>
[Foreign]						
South-East Asia Gas Pipeline Company Ltd.	222,269	-	(59,717)	46,855	6,589	215,996
AES-VCM Mong Duong Power Company Limited	153,271	-	-	27,031	(13,161)	167,141
7623704 Canada Inc.	134,034	-	(921)	175	4,224	137,512
Eureka Moly LLC	87,878	-	-	(18)	1,741	89,601
AMCI (WA) PTY LTD	72,289	-	-	(3,358)	1,570	70,501
Nickel Mining Company SAS	76,445	-	-	(31,047)	(260)	45,138
NCR LLC	35,447	-	-	(41)	1,332	36,738
KOREA LNG LTD.	53,548	-	(6,342)	6,392	9,460	63,058
PT. Batutua Tembaga Raya	15,382	7,040	-	-	301	22,723
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	19,311	-	-	(412)	(891)	18,008
PT. Wampu Electric Power	8,855	-	-	(397)	248	8,706
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	7,061	-	-	242	(463)	6,840
Roy Hill Holdings Pty Ltd	1,153,434	-	-	12,643	20,782	1,186,859
POSCO-NPS Niobium LLC	381,461	-	(10,893)	11,499	11,503	393,570
CSP - Companhia Siderurgica do Pecem	80,805	88,930	-	116,694	44,034	330,463
KOBRASCO	78,364	-	(29,297)	20,761	18,480	88,308
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	100,908	-	-	258	(3,797)	97,369
DMSA/AMSA	105,964	24,624	-	(60,415)	4,762	74,935
Others (37 companies)	67,273	28,993	(4,252)	(791)	39,428	130,651
	<u>2,853,999</u>	<u>149,587</u>	<u>(111,422)</u>	<u>146,071</u>	<u>145,882</u>	<u>3,184,117</u>
₩	<u>3,945,333</u>	<u>198,394</u>	<u>(111,622)</u>	<u>(88,677)</u>	<u>(61,039)</u>	<u>3,882,389</u>

(*1) Other increase or decrease represents the changes in investments in associates and joint ventures due to disposals, change in capital adjustments effect from translations of financial statements of foreign investees and others.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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(e) Summarized financial information of associates and joint ventures as of and for the years ended December 31, 2017 and 2016 are as follows:

1) December 31, 2017

Company	Assets	Liabilities	Equity	Sales	Net income (loss)
[Domestic]					
EQP POSCO Global NO1 Natural Resources PEF ₩	562,698	866	561,832	-	1,261
SNNC	705,975	459,519	246,456	576,023	2,417
QSONE Co.,Ltd.	248,779	78,680	170,099	15,297	1,236
Chun-cheon Energy Co., Ltd	700,079	539,137	160,942	164,294	(8,250)
Incheon-Gimpo Expressway Co., Ltd.	1,132,233	922,338	209,895	-	(23,221)
BLUE OCEAN Private Equity Fund	311,129	188,512	122,617	445,238	(3,345)
CHUNGJU ENTERPRISE CITY DEVELOPMENT Co.,Ltd	76,184	48,072	28,112	77,093	15,921
UITrans LRT Co., Ltd.	464,074	384,202	79,872	3,689	(13,263)
Daesung Steel	169,774	112,795	56,979	70,434	18,230
Keystone NO. 1. Private Equity Fund	170,155	133,033	37,122	5,391	(2,070)
KoFC POSCO HANWHA KB Shared Growth NO. 2. Private Equity Fund	55,936	1,315	54,621	10,212	(1,578)
KONES, Corp.	2,766	1,616	1,150	5,379	139
POSCO MITSUBISHI CARBON TECHNOLOGY	478,847	295,052	183,795	154,312	46,138
[Foreign]					
South-East Asia Gas Pipeline Company Ltd.	1,911,942	1,121,783	790,159	445,682	171,303
7623704 Canada Inc.	1,182,376	9	1,182,367	-	82,344
Nickel Mining Company SAS	465,700	324,687	141,013	179,683	(4,450)
KOREA LNG LTD.	179,269	86	179,183	34,640	32,446
PT. Batutua Tembaga Raya	336,085	272,542	63,543	195,520	49,091
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	70,437	18,722	51,715	85,850	(3,736)
PT. Wampu Electric Power	212,095	148,177	63,918	779	29,634
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	70,701	43,588	27,113	84,973	1,210
Roy Hill Holdings Pty Ltd	10,148,416	6,600,900	3,547,516	2,988,372	797,008
POSCO-NPS Niobium LLC	697,470	-	697,470	-	32,481
CSP - Compania Siderurgica do Pecem	4,805,353	4,223,392	581,961	1,290,767	(740,591)
KOBRASCO	252,813	35,843	216,970	179,453	112,890
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	717,472	391,871	325,601	1,245,178	5,978
DMSA/AMSA	5,586,171	4,167,906	1,418,265	630,229	(475,958)

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

2) December 31, 2016

(in millions of Won)

Company	Assets	Liabilities	Equity (deficit)	Sales	Net income (loss)
[Domestic]					
EQP POSCO Global NO1 Natural Resources PEF ₩	597,767	864	596,903	-	(1,349)
SNNC	725,987	482,429	243,558	527,101	2,022
QSONE Co.,Ltd.	247,385	77,786	169,599	15,961	1,760
Chun-cheon Energy Co., Ltd	547,805	378,613	169,192	-	(3,748)
Incheon-Gimpo Expressway Co., Ltd.	929,539	718,107	211,432	-	(1,910)
BLUE OCEAN Private Equity Fund	357,723	220,895	136,828	456,311	2,335
CHUNGJU ENTERPRISE CITY DEVELOPMENT Co.,Ltd	136,857	124,666	12,191	19,028	967
UITrans LRT Co., Ltd.	400,761	307,625	93,136	-	(822)
Daesung Steel	150,944	112,194	38,750	60,772	(12,955)
Keystone NO. 1. Private Equity Fund	119,378	79,946	39,432	197	694
KoFC POSCO HANWHA KB Shared Growth NO. 2. Private Equity Fund	96,213	1,094	95,119	14,157	9,561
KONES, Corp.	2,627	1,519	1,108	3,952	(615)
POSCO MITSUBISHI CARBON TECHNOLOGY	448,618	311,070	137,548	53,908	(36,572)
POSCO PLANTEC Co., Ltd.	501,659	678,004	(176,345)	361,351	(43,195)
[Foreign]					
South-East Asia Gas Pipeline Company Ltd.	2,171,689	1,305,942	865,747	491,011	187,114
7623704 Canada Inc.	1,334,391	1	1,334,390	-	19,485
Nickel Mining Company SAS	491,458	347,194	144,264	145,571	(61,473)
KOREA LNG LTD.	303,389	19,704	283,685	33,035	31,962
PT. Batutua Tembaga Raya	351,119	332,037	19,082	-	-
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	83,291	24,676	58,615	117,387	(1,216)
PT. Wampu Electric Power	206,052	165,618	40,434	3,405	(1,984)
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	67,905	40,451	27,454	81,260	938
Roy Hill Holdings Pty Ltd	10,962,261	8,059,714	2,902,547	845,243	129,968
POSCO-NPS Niobium LLC	786,937	-	786,937	-	24,719
CSP - Companhia Siderurgica do Pecem	5,682,161	4,237,247	1,444,914	226,669	243,151
KOBRASCO	178,853	2,236	176,617	72,274	41,522
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	789,336	427,475	361,861	948,488	1,033
DMSA/AMSA	6,570,172	4,842,560	1,727,612	579,388	(519,969)

12. Joint Operations

Details of significant joint operations that the Company is participating in as a party to a joint arrangement as of December 31, 2017 are as follows:

Joint operations	Operation	Ownership (%)	Location
Myanmar A-1/A-3 mine	Mineral development and gas production	51.00	Myanmar
Offshore midstream	Gas transportation facility	51.00	Myanmar
Greenhills mine	Mine development	20.00	Canada
Arctos Anthracite coal project	Mine development	50.00	Canada
Mt. Thorley J/V	Mine development	20.00	Australia
POSMAC J/V	Mine development	20.00	Australia
RUM J/V	Mine development	10.00	Australia
Hanam-Gamil package public housing project	Construction	7.70	Korea
Sejong 2-1 P3 Block public housing project	Construction	37.00	Korea
Yongin-Giheung Station area city development project	Construction	61.00	Korea
Korean wave world complex land multi-purpose building development project	Construction	33.30	Korea
Sejong 4-1 P3 Block public housing project	Construction	60.00	Korea

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

13. Investment Property, Net

(a) Investment property as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

		2017			2016		
		Acquisition cost	Accumulated depreciation and impairment loss	Book value	Acquisition cost	Accumulated depreciation and impairment loss	Book value
Land	₩	360,402	-	360,402	423,910	(31,187)	392,723
Buildings		727,022	(92,982)	634,040	807,657	(136,118)	671,539
Structures		7,717	(1,436)	6,281	3,148	(1,001)	2,147
Construction-in-progress		64,191	-	64,191	51,311	-	51,311
	₩	<u>1,159,332</u>	<u>(94,418)</u>	<u>1,064,914</u>	<u>1,286,026</u>	<u>(168,306)</u>	<u>1,117,720</u>

As of December 31, 2017, the fair value of investment property is ₩1,663,682 million, among which the Company believed the fair value of its investment property of six subsidiaries, including POSCO (Dalian) IT Center Development Co., Ltd. approximate its book value of ₩126,026 million. Also, the Company used the prior year's fair value for some of the investment property since it is believed that the fair value has not changed significantly.

(b) Changes in the carrying amount of investment property for the years ended December 31, 2017 and 2016 were as follows:

1) For the year ended December 31, 2017

(in millions of Won)

		Beginning	Acquisitions	Disposals	Depreciation	Others(*1)	Ending
Land	₩	392,723	20,941	(37,725)	-	(15,537)	360,402
Buildings		671,539	38,831	(9,506)	(23,450)	(43,374)	634,040
Structures		2,147	-	-	(591)	4,725	6,281
Construction-in-progress		51,311	17,648	-	-	(4,768)	64,191
	₩	<u>1,117,720</u>	<u>77,420</u>	<u>(47,231)</u>	<u>(24,041)</u>	<u>(58,954)</u>	<u>1,064,914</u>

(*1) Includes reclassification resulting from changing purpose of use, adjustment of foreign currency translation difference and others.

2) For the year ended December 31, 2016

(in millions of Won)

		Beginning	Acquisitions	Disposals	Depreciation(*1)	Others(*2)	Ending
Land	₩	346,879	24,116	(8,056)	-	29,784	392,723
Buildings		696,526	7,548	(3,339)	(24,043)	(5,153)	671,539
Structures		1,819	1	-	(288)	615	2,147
Construction-in-progress		39,068	13,910	-	-	(1,667)	51,311
	₩	<u>1,084,292</u>	<u>45,575</u>	<u>(11,395)</u>	<u>(24,331)</u>	<u>23,579</u>	<u>1,117,720</u>

(*1) Impairment loss on investment property amounting to ₩318 million is included.

(*2) Includes reclassification resulting from changing purpose of use, adjustment of foreign currency translation difference and others.

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14. Property, Plant and Equipment, Net

(a) Property, plant and equipment as of December 31, 2017 and 2016 are as follows:

	2017				2016			
	Acquisition cost	Accumulated depreciation and impairment loss	Government grants	Book value	Acquisition cost	Accumulated depreciation and impairment loss	Government grants	Book value
Land	₩ 2,534,102	(6,452)	-	2,527,650	2,607,660	(6,452)	-	2,601,208
Buildings	9,311,426	(4,433,996)	(412)	4,877,018	9,180,028	(4,183,974)	(423)	4,995,631
Structures	5,452,713	(2,686,802)	(59)	2,765,852	5,385,365	(2,476,818)	(67)	2,908,480
Machinery and equipment	46,669,612	(27,301,410)	(245)	19,367,957	46,698,254	(26,379,544)	(320)	20,318,390
Vehicles	296,815	(263,884)	(70)	32,861	306,770	(259,986)	(85)	46,699
Tools	380,144	(315,446)	(1,058)	63,640	385,960	(312,266)	(2,314)	71,380
Furniture and fixtures	643,779	(498,192)	(148)	145,439	609,736	(477,064)	(266)	132,406
Finance lease assets	243,160	(97,903)	-	145,257	248,590	(89,577)	-	159,013
Bearer plants	70,031	(4,516)	-	65,515	-	-	-	-
Construction-in-progress	1,897,885	-	(5,539)	1,892,346	2,542,233	-	(5,101)	2,537,132
	₩ 67,499,667	(35,608,601)	(7,531)	31,883,535	67,964,596	(34,185,681)	(8,576)	33,770,339

(b) Changes in the carrying amount of property, plant and equipment for the years ended December 31, 2017 and 2016 were as follows:

1) For the year ended December 31, 2017

	Beginning	Acquisitions	Disposals	Depreciation(*1)	Others(*2)	Ending
Land	₩ 2,601,208	3,477	(18,226)	-	(58,809)	2,527,650
Buildings	4,995,631	53,961	(5,782)	(361,531)	194,739	4,877,018
Structures	2,908,480	18,943	(2,558)	(246,229)	87,216	2,765,852
Machinery and equipment	20,318,390	194,653	(93,210)	(2,217,435)	1,165,559	19,367,957
Vehicles	46,699	9,982	(1,623)	(22,340)	143	32,861
Tools	71,380	16,424	(976)	(28,539)	5,351	63,640
Furniture and fixtures	132,406	61,597	(1,296)	(48,416)	1,148	145,439
Finance lease assets	159,013	4,760	(453)	(14,810)	(3,253)	145,257
Bearer plants	-	-	-	(4,830)	70,345	65,515
Construction-in-progress	2,537,132	1,894,067	(817)	(36,706)	(2,501,330)	1,892,346
	₩ 33,770,339	2,257,864	(124,941)	(2,980,836)	(1,038,891)	31,883,535

(*1) Includes impairment loss on property, plant and equipment amounting to ₩117,231 million mainly related to structures of Suncheon Eco Trans Co., Ltd, a subsidiary of the Company.

(*2) Represents assets transferred from construction-in-progress to intangible assets and other property, plant and equipment, reclassifications resulting from changing purpose of use, adjustments of foreign currency translation differences and others.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

2) For the year ended December 31, 2016

<i>(in millions of Won)</i>							
	<u>Beginning</u>	<u>Acquisitions</u>	<u>Business combination</u>	<u>Disposals</u>	<u>Depreciation(*1)</u>	<u>Others(*2)</u>	<u>Ending</u>
Land	₩ 2,572,807	8,901	15,687	(16,176)	(6,452)	26,441	2,601,208
Buildings	5,165,725	37,493	277,242	(12,857)	(396,899)	(75,073)	4,995,631
Structures	2,949,413	19,043	-	(1,994)	(216,631)	158,649	2,908,480
Machinery and equipment	21,093,743	193,856	47,021	(36,095)	(2,277,740)	1,297,605	20,318,390
Vehicles	52,005	8,967	88	(1,990)	(18,484)	6,113	46,699
Tools	73,478	17,546	635	(848)	(27,396)	7,965	71,380
Furniture and fixtures	148,099	30,650	32	(4,248)	(51,361)	9,234	132,406
Finance lease assets	92,796	79,556	-	(38)	(13,409)	108	159,013
Construction-in-progress	<u>2,374,789</u>	<u>1,935,339</u>	<u>2,181</u>	<u>(4,255)</u>	<u>-</u>	<u>(1,770,922)</u>	<u>2,537,132</u>
	₩ <u>34,522,855</u>	<u>2,331,351</u>	<u>342,886</u>	<u>(78,501)</u>	<u>(3,008,372)</u>	<u>(339,880)</u>	<u>33,770,339</u>

(*1) Includes impairment losses on property, plant and equipment amounting to ₩196,882 million. During the year ended December 31, 2016, due to the existence of indicators for impairment, such as continuing operating loss on fuel cell business of the POSCO ENERGY CO., LTD., which is included in other reportable segment, the Company performed impairment test and recognized impairment loss of ₩61,565 million. Recoverable amount was determined based on value-in-use, which was calculated by applying a 14.0% discount rate. The impairment recorded in 2016 also included ₩58,388 million related to POSCO for individual assets based on disposal plans.

(*2) Represents assets transferred from construction-in-progress to intangible assets and other property, plant and equipment, reclassifications resulting from changing purpose of use, adjustments of foreign currency translation differences and others.

(c) Borrowing costs capitalized and the capitalized interest rate for the years ended December 31, 2017 and 2016 were as follows:

<i>(in millions of Won)</i>		<u>2017</u>	<u>2016</u>
Weighted average expenditure	₩	1,180,563	1,070,280
Borrowing costs capitalized		37,261	40,321
Capitalization rate (%)		1.74 ~ 3.45	3.32 ~ 3.82

(d) Property, plant and equipment and investment property pledged as collateral as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>	<u>Collateral right holder</u>		<u>2017</u>	<u>2016</u>
Land	Korea Development Bank and others	₩	822,057	925,670
Buildings and structures	Korea Development Bank and others		1,678,403	1,734,543
Machinery and equipment	Korea Development Bank and others		3,527,420	4,037,813
Construction-in-progress	Korea Development Bank and others		15,389	-
		₩	<u>6,043,269</u>	<u>6,698,026</u>

As of December 31, 2017, assets pledged as collateral amounting to ₩4,984,841 million include investment properties and other assets such as right to use land.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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15. Goodwill and Other Intangible Assets, Net

(a) Goodwill and other intangible assets as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	2017				2016			
	Acquisition cost	Accumulated amortization and impairment	Government grants	Book value	Acquisition cost	Accumulated amortization and impairment	Government grants	Book value
Goodwill	₩ 1,604,288	(254,450)	-	1,349,838	1,669,556	(294,425)	-	1,375,131
Intellectual property rights	3,140,159	(690,966)	-	2,449,193	2,923,030	(401,156)	(703)	2,521,171
Premium in rental	139,873	(21,563)	-	118,310	139,843	(20,804)	-	119,039
Development expense	397,129	(316,892)	(19)	80,218	376,327	(259,184)	(131)	117,012
Port facilities usage rights	705,692	(396,319)	-	309,373	633,025	(376,408)	-	256,617
Exploration and evaluation assets	296,320	(90,376)	-	205,944	196,124	(33,856)	-	162,268
Customer relationships	857,624	(390,679)	-	466,945	859,643	(345,398)	-	514,245
Power generation permit	539,405	-	-	539,405	539,405	-	-	539,405
Other intangible assets	1,006,219	(573,152)	(24)	433,043	1,007,871	(524,000)	(30)	483,841
	₩ 8,686,709	(2,734,397)	(43)	5,952,269	8,344,824	(2,255,231)	(864)	6,088,729

(b) The changes in carrying amount of goodwill and other intangible assets for the years ended December 31, 2017 and 2016 were as follows:

1) For the year ended December 31, 2017

(in millions of Won)

	Beginning	Acquisitions	Business combination	Disposals	Amortization	Impairment loss	Others(*2)	Ending
Goodwill	₩ 1,375,131	-	-	-	-	(21,750)	(3,543)	1,349,838
Intellectual property rights	2,521,171	167,580	47,625	(450)	(217,932)	(74,524)	5,723	2,449,193
Premium in rental(*1)	119,039	6,006	-	(3,666)	(611)	(1,661)	(797)	118,310
Development expense	117,012	3,479	-	(1,179)	(66,847)	(694)	28,447	80,218
Port facilities usage rights	256,617	-	-	-	(19,912)	-	72,668	309,373
Exploration and evaluation assets	162,268	91,548	-	-	-	(56,519)	8,647	205,944
Customer relationships	514,245	-	-	-	(46,508)	-	(792)	466,945
Power generation permit	539,405	-	-	-	-	-	-	539,405
Other intangible assets	483,841	84,502	-	(1,641)	(57,964)	(11,829)	(63,866)	433,043
	₩ 6,088,729	353,115	47,625	(6,936)	(409,774)	(166,977)	46,487	5,952,269

(*1) Premium in rental includes memberships with indefinite useful lives.

(*2) Represents assets transferred from construction-in-progress to intangible assets and assets transferred from property, plant and equipment, adjustments of foreign currency translation difference and others.

2) For the year ended December 31, 2016

(in millions of Won)

	Beginning	Acquisitions	Disposals	Amortization	Impairment loss	Others(*2)	Ending
Goodwill	₩ 1,461,954	-	-	-	(95,984)	9,161	1,375,131
Intellectual property rights	2,667,086	56,849	(753)	(204,112)	(16,786)	18,887	2,521,171
Premium in rental(*1)	127,949	1,964	(7,526)	(243)	(1,559)	(1,546)	119,039
Development expense	135,796	4,027	(60)	(61,732)	(298)	39,279	117,012
Port facilities usage rights	264,801	-	-	(15,217)	-	7,033	256,617
Exploration and evaluation assets	151,144	45,524	-	-	(3,290)	(31,110)	162,268
Customer relationships	559,809	-	-	(47,790)	-	2,226	514,245
Power generation permit	539,405	-	-	-	-	-	539,405
Other intangible assets	497,810	52,350	(1,454)	(48,910)	(7,353)	(8,602)	483,841
	₩ 6,405,754	160,714	(9,793)	(378,004)	(125,270)	35,328	6,088,729

(*1) Premium in rental includes memberships with indefinite useful lives.

(*2) Represents assets transferred from construction-in-progress to intangible assets and assets transferred from property, plant and equipment, adjustments of foreign currency translation difference and others.

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(c) For the purpose of impairment testing, goodwill is allocated to individually operating entities which are determined to be CGUs. The goodwill amounts as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

Reporting segments	Total number of CGUs		CGUs	2017	2016
	2017	2016			
Steel	7	9	POSCO VST CO., LTD.	₩ 36,955	36,955
			Others(*1)	12,494	13,151
Trading	2	3	POSCO DAEWOO Corporation(*1)	1,165,030	1,163,922
			PT. Bio Inti Agrindo	7,099	8,070
E&C	2	4	POSCO ENGINEERING & CONSTRUCTION CO., LTD.(*2)	90,426	-
			POSCO Engineering CO., Ltd(*2)	-	111,309
Others	5	6	DONG FANG JIN HONG	157	166
			POSCO ENERGY CO., LTD.	26,471	26,471
			Others	11,206	15,087
				₩	
	<u>16</u>	<u>21</u>		<u>1,349,838</u>	<u>1,375,131</u>

(*1) For the year ended December 31, 2017, POSCO DAEWOO Corporation has taken over steel marketing and other business unit of POSCO Processing & Service. As a result, goodwill of POSCO Processing & Service amounting to ₩1,108 million was transferred to POSCO DAEWOO Corporation.

Recoverable amounts of POSCO DAEWOO Corporation are determined based on its value in use. As of December 31, 2017, value in use is estimated by applying a 8.1% discount rate and a 1.9% terminal growth rate within 5 years, the period for the estimated future cash flows, based on management's business plan. The terminal growth rate does not exceed long-term average growth rate of its industry. No impairment loss on goodwill was recognized as of December 31, 2017 as the recoverable amount exceeded the carrying amount of the CGU.

The estimated recoverable amount of the CGU exceeded the carrying amount by ₩117,324 million. Value in use of the CGU was affected by the assumptions such as discount rate and terminal growth used in discount cash flow model. When the discount rate increases by 0.25%, value in use will be decreased by 3.45% and when the terminal growth rate decreases by 0.25%, value in use will be decreased by 1.78%. Management believes that any reasonably possible negative change in the key assumptions on which the recoverable amount is based would result in impairment loss of goodwill.

(*2) For the year ended December 31, 2017, POSCO Engineering CO., Ltd was merged into POSCO ENGINEERING & CONSTRUCTION CO., LTD, resulting in transfer of its goodwill to POSCO ENGINEERING & CONSTRUCTION CO., LTD.

Recoverable amounts of POSCO ENGINEERING & CONSTRUCTION CO., LTD are determined based on its value in use. As of December 31, 2017, value in use is estimated by applying a 8.2% discount rate and a 1.0% terminal growth rate within 5 years, the period for the estimated future cash flows, based on management's business plan. The terminal growth rate does not exceed long-term average growth rate of its industry. Impairment loss on goodwill of ₩20,883 million was recognized as of December 31, 2017 as the recoverable amount is lower than the carrying amount of the CGU.

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Value in use of the CGU was affected by the assumptions such as discount rate and terminal growth used in discount cash flow model. When the discount rate increases by 0.25%, value in use will be decreased by 3.02% and when the terminal growth rate decreases by 0.25%, value in use will be decreased by 2.06%.

16. Other Assets

Other current assets and other non-current assets as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	2017	2016
Current		
Advance payment	₩ 661,779	787,452
Prepaid expenses	143,032	105,102
Firm commitment asset	15,115	-
Others	1,316	1,930
	<u>₩ 821,242</u>	<u>894,484</u>
Non-current		
Long-term advance payment	₩ 24,201	27,189
Long-term prepaid expenses	333,153	380,678
Others(*1)	131,657	159,813
	<u>₩ 489,011</u>	<u>567,680</u>

(*1) As of December 31, 2017 and 2016, the Company recognized tax assets amounting to ₩88,633 million and ₩100,693 million, respectively, based on the Company's best estimate of the tax amounts to be refunded when the result of the Company's appeal in connection with the additional income tax payment in prior years' tax audits that were finalized and claim for rectification are finalized.

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17. Borrowings

(a) Short-term borrowings and current portion of long-term borrowings as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	Bank	Issuance date	Maturity date	Interest rate (%)	2017	2016
Short-term borrowings						
Bank overdrafts	JP Morgan and others	January, 2017~ December, 2017	January, 2018~ December, 2018	1.2~9.0	₩ 217,879	254,036
Short-term borrowings	HSBC and others	January, 2017~ December, 2017	January, 2018~ December, 2018	0.3~10.5	7,956,939	7,725,691
					<u>8,174,818</u>	<u>7,979,727</u>
Current portion of long-term liabilities						
Current portion of long-term borrowings	Export-Import bank of Korea and others	September, 2001~ November, 2017	February, 2018~ December, 2018	0.4~8.5	1,407,123	1,390,733
Current portion of debentures	Korea Development Bank and others	August, 2009~ November, 2016	February, 2018~ December, 2018	1.4~6.1	1,693,974	825,176
Less: Current portion of discount on debentures issued					(1,399)	(829)
					<u>3,099,698</u>	<u>2,215,080</u>
					<u>₩ 11,274,516</u>	<u>10,194,807</u>

(b) Long-term borrowings, excluding current portion as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	Bank	Issuance date	Maturity date	Interest rate (%)	2017	2016
Long-term borrowings	Export-Import bank of Korea and others	September, 2001~ December, 2017	March, 2019~ March, 2037	0.5~8.4	₩ 4,839,199 (36,459)	6,420,612 (55,799)
Less : Present value discount						
Bonds	Korea Development Bank and others	August, 2009~ November, 2017	February, 2019~ July, 2025	1.8~6.3	4,999,575 (13,174)	6,163,896 (18,518)
Less: Discount on debentures issued						
					<u>₩ 9,789,141</u>	<u>12,510,191</u>

(c) Assets pledged as collateral in regards to the borrowings as of December 31, 2017 are as follows:

(in millions of Won)

	Bank	Book value	Pledged amount
Property, plant and equipment and Investment property(*1)	Korea Development Bank and others	₩ 5,777,330	4,969,201
Trade accounts and notes receivable	Korea Development Bank and others	147,581	147,581
Inventories	Export-Import Bank of Korea and others	162,198	116,378
Financial instruments	Woori Bank and others	56,491	55,048
		<u>₩ 6,143,600</u>	<u>5,288,208</u>

(*1) Includes other assets such as right to use land.

POSCO and Subsidiaries
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18. Other Payables

Other payables as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	2017	2016
Current		
Accounts payable	₩ 800,374	854,623
Accrued expenses	653,923	665,295
Dividend payable	7,213	7,770
Finance lease liabilities	17,763	24,523
Withholdings	274,188	299,448
	₩ <u>1,753,461</u>	<u>1,851,659</u>
Non-current		
Accounts payable	₩ 4,632	6,823
Accrued expenses	14,234	41,082
Finance lease liabilities	75,255	89,886
Long-term withholdings	53,629	70,768
	₩ <u>147,750</u>	<u>208,559</u>

19. Other Financial Liabilities

Other financial liabilities as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	2017	2016
Current		
Derivatives liabilities	₩ 69,872	85,786
Financial guarantee liabilities	59,940	63,962
	₩ <u>129,812</u>	<u>149,748</u>
Non-current		
Derivatives liabilities	₩ 85,638	37,110
Financial guarantee liabilities	28,467	44,199
	₩ <u>114,105</u>	<u>81,309</u>

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20. Provisions

(a) Provisions as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	2017		2016	
	Current	Non-current	Current	Non-current
Provision for bonus payments	₩ 49,171	-	42,986	-
Provision for construction warranties	11,804	106,232	10,551	86,158
Provision for legal contingencies and claims(*1)	495	36,269	4,348	80,498
Provision for restoration(*2)	12,273	121,917	10,169	52,425
Others(*3,4)	37,203	212,754	46,811	118,658
	₩ 110,946	477,172	114,865	337,739

(*1) The Company recognized probable outflow of resources amounting to ₩27,963 million and ₩30,425 million as provisions for legal contingencies and asserted claims in relation to lawsuits against the Company as of December 31, 2017 and 2016, respectively.

(*2) Due to contamination of lands near the Company's magnesium smelting plant located in Gangneung province and others, the Company recognized present values of estimated costs for recovery, ₩29,471 million as provisions for restoration as of December 31, 2017. In order to determine the estimated costs, the Company has assumed that it would use all of technologies and materials available for now to recover the land. In addition, the Company has applied a discount rate of 2.73% to measure present value of these costs.

(*3) As of December 31, 2017 and 2016, POSCO ENERGY CO., LTD., a subsidiary of the Company, recognized ₩157,461 million and ₩87,827 million of provisions for warranties, respectively, for the service contract on fuel cell based on its estimate of probable outflow of resources.

(*4) As of December 31, 2017 and 2016, the amount includes a provision of ₩23,600 million for expected outflow of resources in connection with the performance guarantee for the Hwaseong-Dongtan complexes development project of POSCO ENGINEERING & CONSTRUCTION CO., LTD.

(b) The following are the key assumptions concerning the future and other key sources of estimation uncertainties at the end of the reporting period.

	Key assumptions for the estimation
Provision for bonus payments	Estimations based on financial performance
Provision for construction warranties	Estimations based on historical warranty data
Provision for legal contingencies and claims	Estimations based on the degree of probability of an unfavorable outcome and the ability to make a sufficient reliable estimate of the amount of loss

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(c) Changes in provisions for the years ended December 31, 2017 and 2016 were as follows:

1) For the year ended December 31, 2017

<i>(in millions of Won)</i>		Beginning	Increase	Utilization	Reversal	Others(*1)	Ending
Provision for bonus payments	₩	42,986	74,728	(64,319)	(3,035)	(1,189)	49,171
Provision for construction warranties		96,709	40,916	(18,006)	(2,502)	919	118,036
Provision for legal contingencies and claims		84,846	27,459	(70,156)	(1,749)	(3,636)	36,764
Provision for restoration		62,594	63,438	(8,530)	-	16,688	134,190
Others		165,469	161,054	(64,850)	(20,199)	8,483	249,957
	₩	<u>452,604</u>	<u>367,595</u>	<u>(225,861)</u>	<u>(27,485)</u>	<u>21,265</u>	<u>588,118</u>

(* 1) Includes adjustments of foreign currency translation differences and others.

2) For the year ended December 31, 2016

<i>(in millions of Won)</i>		Beginning	Increase	Utilization	Reversal	Others(*1)	Ending
Provision for bonus payments	₩	42,602	44,106	(42,211)	(272)	(1,239)	42,986
Provision for construction warranties		81,446	33,925	(19,469)	(2,695)	3,502	96,709
Provision for legal contingencies and claims		52,610	45,525	(14,012)	(188)	911	84,846
Provision for restoration		45,111	42,529	(13,367)	(12,475)	796	62,594
Others		102,243	131,911	(68,143)	(3,086)	2,544	165,469
	₩	<u>324,012</u>	<u>297,996</u>	<u>(157,202)</u>	<u>(18,716)</u>	<u>6,514</u>	<u>452,604</u>

(* 1) Includes adjustments of foreign currency translation differences and others.

21. Employee Benefits

(a) Defined contribution plans

The expenses related to post-employment benefit plans under defined contribution plans for the years ended December 31, 2017 and 2016 were as follows:

<i>(in millions of Won)</i>		2017	2016
Expense related to post-employment benefit plans under defined contribution plans	₩	35,538	30,344

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(b) Defined benefit plans

- 1) The amounts recognized in relation to net defined benefit liabilities in the statements of financial position as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>	2017	2016
Present value of funded obligations	₩ 1,826,907	1,715,583
Fair value of plan assets(*1)	(1,714,166)	(1,693,118)
Present value of non-funded obligations	16,228	17,437
Net defined benefit liabilities	₩ <u>128,969</u>	<u>39,902</u>

(*1) As of December 31, 2017 and 2016, the Company recognized net defined benefit assets amounting to ₩8,224 million and ₩83,702 million, respectively, since there are consolidated entities whose fair value of plan assets exceeded the present value of defined benefit obligations.

- 2) Changes in present value of defined benefit obligations for the years ended December 31, 2017 and 2016 were as follows:

<i>(in millions of Won)</i>	2017	2016
Defined benefit obligation at the beginning of period	₩ 1,733,020	1,714,115
Current service costs	209,612	285,706
Interest costs	35,830	39,286
Remeasurements :	51,994	(32,927)
- Gain from change in financial assumptions	(50,218)	(72,910)
- Loss (gain) from change in demographic assumptions	15,952	(4,140)
- Others	86,260	44,123
Benefits paid	(185,220)	(278,278)
Others	(2,101)	5,118
Defined benefit obligation at the end of period	₩ <u>1,843,135</u>	<u>1,733,020</u>

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

<i>(in millions of Won)</i>	2017	2016
Fair value of plan assets at the beginning of period	₩ 1,693,118	1,532,090
Interest on plan assets	45,516	37,385
Remeasurement of plan assets	(17,190)	(6,963)
Contributions to plan assets	164,828	328,671
Benefits paid	(168,643)	(189,817)
Others	(3,463)	(8,248)
Fair value of plan assets at the end of period	₩ <u>1,714,166</u>	<u>1,693,118</u>

The Company expects to make an estimated contribution of ₩164,865 million to the defined benefit plan assets in 2018.

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4) The fair value of plan assets as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>	2017	2016
Equity instruments	₩ 41,218	56,187
Debt instruments	367,027	411,726
Deposits	1,254,571	1,167,475
Others	51,350	57,730
	<u>₩ 1,714,166</u>	<u>1,693,118</u>

5) The amounts recognized in consolidated statements of comprehensive income for the years ended December 31, 2017 and 2016 were as follows:

<i>(in millions of Won)</i>	2017	2016
Current service costs	₩ 209,612	285,706
Net interest costs(*1)	(9,686)	1,901
	<u>₩ 199,926</u>	<u>287,607</u>

(*1) The actual return on plan assets amounted to ₩28,326 million and ₩30,422 million for the years ended December 31, 2017 and 2016, respectively.

The above expenses by function were as follows:

<i>(in millions of Won)</i>	2017	2016
Cost of sales	₩ 131,724	161,810
Selling and administrative expenses	67,424	124,994
Others	778	803
	<u>₩ 199,926</u>	<u>287,607</u>

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- 6) Accumulated actuarial gains (losses), net of tax recognized in other comprehensive income for the years ended December 31, 2017 and 2016 were as follows:

(in millions of Won)

		<u>2017</u>	<u>2016</u>
Beginning	₩	(251,612)	(272,152)
Current actuarial gains		(47,543)	20,540
Ending	₩	<u>(299,155)</u>	<u>(251,612)</u>

- 7) The principal actuarial assumptions as of December 31, 2017 and 2016 are as follows:

(%)

		<u>2017</u>	<u>2016</u>
Discount rate		2.70~7.75	2.15~8.59
Expected future increase in salaries(*1)		1.04~10.00	1.00~10.00

(*1) The expected future increase in salaries is based on the average salary increase rate for the past three years.

All assumptions are reviewed at the end of the reporting period. Additionally, the total estimated defined benefit obligation includes actuarial assumptions associated with the long-term characteristics of the defined benefit plan.

- 8) Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding the other assumptions constant, would have affected the defined benefit obligation by the amounts shown below:

(in millions of Won)

		<u>1% Increase</u>		<u>1% Decrease</u>	
		<u>Amount</u>	<u>Percentage(%)</u>	<u>Amount</u>	<u>Percentage(%)</u>
Discount rate	₩	(123,568)	(6.7)	138,196	7.5
Expected future increases in salaries		136,385	7.4	(124,400)	(6.7)

- 9) As of December 31, 2017 the maturity of the expected benefit payments are as follows:

(in millions of Won)

		<u>Within 1 year</u>	<u>1 year - 5 years</u>	<u>5 years - 10 years</u>	<u>10 years - 20 years</u>	<u>After 20 years</u>	<u>Total</u>
Benefits paid	₩	109,212	613,786	792,792	655,599	347,280	2,518,669

The maturity analysis of the defined benefit obligation was nominal amounts of defined benefit obligations using expected remaining period of service of employees.

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22. Other Liabilities

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

<i>(in millions of Won)</i>		2017	2016
Current			
Due to customers for contract work	₩	821,875	1,160,201
Advances received		599,879	707,086
Unearned revenue		7,121	8,702
Withholdings		221,940	186,665
Firm commitment liability		12,192	-
Others		33,590	22,307
	₩	<u>1,696,597</u>	<u>2,084,961</u>
Non-current			
Unearned revenue	₩	18,440	20,013
Others		14,360	40,338
	₩	<u>32,800</u>	<u>60,351</u>

23. Financial Instruments

(a) Classification of financial instruments

1) Financial assets as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>		2017	2016
Financial assets at fair value through profit or loss			
Financial assets held for trading	₩	1,970	-
Derivatives assets held for trading		65,051	147,582
Derivatives assets held as hedging instrument		3,239	-
Available-for-sale financial assets		1,978,115	2,514,924
Held-to-maturity financial assets		5,211	2,470
Loans and receivables		21,394,092	19,390,610
	₩	<u>23,447,678</u>	<u>22,055,586</u>

The Company applies hedge accounting which uses forward contracts as hedging instrument in order to hedge the risk of changes in fair value of product prices regarding firm commitments or purchase commitments. Also, the Company applies cash flow accounting which uses currency swap as hedging instrument in order to hedge the risk of changes in foreign currency which influences cash flow from borrowings.

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2) Financial liabilities as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>	2017	2016
Financial liabilities at fair value through profit or loss		
Derivatives liabilities held for trading	₩ 142,280	122,896
Derivatives liabilities held as hedging instrument	13,230	-
Financial liabilities measured at amortized cost		
Trade accounts and notes payable	3,477,678	4,117,798
Borrowings	21,063,657	22,704,998
Financial guarantee liabilities	88,407	108,161
Others	1,865,683	2,007,114
	₩ 26,650,935	29,060,967

3) Finance income and costs by category of financial instrument for the years ended December 31, 2017 and 2016 were as follows:

① For the year ended December 31, 2017

<i>(in millions of Won)</i>	Finance income and costs						Other comprehensive income (loss)	
	Interest income (expense)	Gain and loss on valuation	Gain and loss on foreign currency	Gain and loss on disposal	Impairment loss	Others		Total
Financial assets at fair value through profit or loss	₩ -	16	-	-	-	-	16	-
Derivatives assets	-	(99,942)	-	206,362	-	-	106,420	(143)
Available-for-sale financial assets	60	-	-	418,789	(123,214)	92,961	388,596	(31,389)
Held-to-maturity financial assets	236	-	-	-	-	7	243	-
Loans and receivables	212,155	-	(607,837)	(32,456)	-	(304)	(428,442)	-
Derivatives liabilities	-	(61,809)	-	(231,908)	-	-	(293,717)	-
Financial liabilities measured at amortized cost	(653,115)	-	777,935	-	-	(9,546)	115,274	-
	₩ (440,664)	(161,735)	170,098	360,787	(123,214)	83,118	(111,610)	(31,532)

② For the year ended December 31, 2016

<i>(in millions of Won)</i>	Finance income and costs						Other comprehensive income (loss)	
	Interest income (expense)	Gain and loss on valuation	Gain and loss on foreign currency	Gain and loss on disposal	Impairment loss	Others		Total
Derivatives assets	₩ -	57,411	-	310,625	-	-	368,036	-
Available-for-sale financial assets	431	-	-	127,524	(248,404)	41,000	(79,449)	310,608
Held-to-maturity financial assets	266	-	-	-	-	38	304	-
Loans and receivables	181,778	-	140,751	(17,854)	-	(172)	304,503	-
Derivatives liabilities	-	(72,976)	-	(332,415)	-	-	(405,391)	-
Financial liabilities measured at amortized cost	(658,726)	-	(283,059)	(61)	-	(28,367)	(970,213)	-
	₩ (476,251)	(15,565)	(142,308)	87,819	(248,404)	12,499	(782,210)	310,608

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(b) Credit risk

1) Credit risk exposure

The carrying amount of financial assets represents the Company's maximum exposure to credit risk. The maximum exposure to credit risk as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>	2017	2016
Cash and cash equivalents	₩ 2,612,530	2,447,619
Financial assets held for trading	1,970	-
Derivative assets	68,290	147,582
Available-for-sale financial assets	192,866	51,649
Held-to-maturity financial assets	5,211	2,470
Loans and other receivables	9,099,444	7,104,940
Trade accounts and notes receivable, net	8,950,548	9,786,927
Long-term trade accounts and notes receivable, net	731,570	51,124
	<u>₩ 21,662,429</u>	<u>19,592,311</u>

The Company provided financial guarantees for the repayment of loans of associates, joint ventures and third parties. As of December 31, 2017 and 2016, the maximum exposure to credit risk related to the financial guarantees amounted to ₩3,135,084 million and ₩2,995,544 million, respectively.

2) Impairment losses on financial assets

① Allowance for doubtful accounts as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>	2017	2016
Trade accounts and notes receivable	₩ 634,129	558,125
Other accounts receivable	187,706	203,346
Loans	258,957	210,346
Other assets	13,672	5,954
	<u>₩ 1,094,464</u>	<u>977,771</u>

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- ② Impairment losses on financial assets for the years ended December 31, 2017 and 2016 were as follows:

(in millions of Won)

	2017	2016
Bad debt expenses	₩ 173,694	165,150
Other bad debt expenses(*1)	100,920	50,225
Impairment losses on available-for-sale financial assets	123,214	248,404
Less: Recovery of allowance for other bad debt accounts	(2,743)	(12,658)
Less: Recovery of impairment loss on held-to-maturity financial assets	(20)	(38)
	<u>₩ 395,065</u>	<u>451,083</u>

(*1) Other bad debt expenses are mainly related to loans and other accounts receivable.

- ③ The aging and impairment losses of trade accounts and notes receivable as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	2017		2016	
	Trade accounts and notes receivable	Impairment	Trade accounts and notes receivable	Impairment
Not due	₩ 7,862,077	65,314	8,076,392	62,511
Over due less than 1 month	445,390	12,546	790,042	27,482
1 month - 3 months	170,682	742	205,394	8,955
3 months - 12 months	384,313	21,030	189,605	26,814
Over 12 months	1,453,785	534,497	1,134,743	432,363
	<u>₩ 10,316,247</u>	<u>634,129</u>	<u>10,396,176</u>	<u>558,125</u>

- ④ The aging and impairment losses of other receivables as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	2017		2016	
	Other receivables	Impairment	Other receivables	Impairment
Not due	₩ 1,888,726	9,672	1,641,924	23,958
Over due less than 1 month	235,559	35,539	197,772	75,207
1 month - 3 months	69,372	54,335	27,525	1,189
3 months - 12 months	96,942	64,467	82,337	20,300
over 12 months	365,202	296,322	357,401	298,992
	<u>₩ 2,655,801</u>	<u>460,335</u>	<u>2,306,959</u>	<u>419,646</u>

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- ⑤ Changes in the allowance for doubtful accounts for the years ended December 31, 2017 and 2016 were as follows:

(in millions of Won)

		2017	2016
Beginning	₩	977,771	999,678
Bad debt expenses		173,694	165,150
Other bad debt expenses		98,177	37,567
Others		(155,178)	(224,624)
Ending	₩	<u>1,094,464</u>	<u>977,771</u>

(c) Liquidity risk

- 1) Contractual maturities for non-derivative financial liabilities, including estimated interest, are as follows:

(in millions of Won)

	Book value	Contractual cash flow	Within 1 year	1 year - 5 years	After 5 years
Trade accounts and notes payable	₩ 3,477,679	3,478,992	3,466,001	12,991	-
Borrowings	21,063,657	22,928,112	12,093,516	9,200,416	1,634,180
Financial guarantee liabilities(*1)	88,407	3,135,084	3,135,084	-	-
Other financial liabilities	1,865,683	1,874,667	1,721,004	153,663	-
	₩ <u>26,495,426</u>	<u>31,416,855</u>	<u>20,415,605</u>	<u>9,367,070</u>	<u>1,634,180</u>

- (*1) For issued financial guarantee contracts, the maximum amount of the guarantee is allocated to the earliest period in which the guarantee could be called.

- 2) The maturity analysis of derivative financial liabilities is as follows:

(in millions of Won)

		Within 1 year	1 year - 5 years	Total
Currency forward	₩	9,744	300	10,044
Currency futures		9,632	74,834	84,466
Currency swaps		25,553	10,504	36,057
Interest swaps		153	-	153
Other forwards		24,790	-	24,790
	₩	<u>69,872</u>	<u>85,638</u>	<u>155,510</u>

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(d) Currency risk

- 1) The Company has exposure to the risk that the fair value or future cash flows of a financial instrument will fluctuate because of the changes in foreign exchange rates. The exposure to currency risk as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

		2017		2016	
		Assets	Liabilities	Assets	Liabilities
USD	₩	4,215,151	5,940,380	5,007,649	6,636,065
EUR		552,630	454,072	463,110	550,235
JPY		165,356	709,318	45,975	821,403
Others		220,723	117,632	219,444	286,112

- 2) As of December 31, 2017 and 2016, provided that functional currency against foreign currencies other than functional currency hypothetically strengthens or weakens by 10%, the changes in gain or loss for the years ended December 31, 2017 and 2016 were as follows:

(in millions of Won)

		2017		2016	
		10% increase	10% decrease	10% increase	10% decrease
USD	₩	(172,523)	172,523	(162,842)	162,842
EUR		9,856	(9,856)	(8,713)	8,713
JPY		(54,396)	54,396	(77,543)	77,543

(e) Interest rate risk

- 1) The carrying amount of interest-bearing financial instruments as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

		2017	2016
Fixed rate			
Financial assets	₩	10,943,300	8,650,483
Financial liabilities		(11,179,635)	(10,794,724)
	₩	<u>(236,335)</u>	<u>(2,144,241)</u>
Variable rate			
Financial liabilities	₩	(9,977,040)	(12,024,683)

- 2) Sensitivity analysis on the fair value of financial instruments with fixed interest rate

The Company does not account for any fixed rate financial assets and liabilities at fair value through profit or loss, and the Company does not designate derivatives (interest rate swaps) as hedging instruments under fair value hedge accounting model. Therefore a change in interest rates at the reporting date would not affect profit or loss.

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3) Sensitivity analysis on the cash flows of financial instruments with variable interest rate

As of December 31, 2017 and 2016, provided that other factors remain the same and the interest rate of borrowings with floating rates increases or decreases by 1%, the changes in interest expense for the years ended December 31, 2017 and 2016 were as follows:

(in millions of Won)

	2017		2016	
	1% increase	1% decrease	1% increase	1% decrease
Variable rate financial instruments	₩ (99,770)	99,770	(120,247)	120,247

(f) Fair value

1) Fair value and book value

The carrying amount and the fair value of financial instruments as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	2017		2016	
	Book value	Fair value	Book value	Fair value
Financial assets measured at fair value				
Available-for-sale financial assets(*1)	₩ 1,449,522	1,449,522	2,139,687	2,139,687
Financial assets held for trading	1,970	1,970	-	-
Derivatives assets	68,290	68,290	147,582	147,582
	<u>1,519,782</u>	<u>1,519,782</u>	<u>2,287,269</u>	<u>2,287,269</u>
Financial assets measured at amortized cost(*2)				
Cash and cash equivalents	2,612,530	2,612,530	2,447,619	2,447,619
Trade accounts and notes receivable, net	9,682,118	9,682,118	9,838,051	9,838,051
Loans and other receivables, net	9,099,444	9,099,444	7,104,940	7,104,940
Held-to-maturity financial assets	5,211	5,211	2,470	2,470
	<u>21,399,303</u>	<u>21,399,303</u>	<u>19,393,080</u>	<u>19,393,080</u>
Financial liabilities measured at fair value				
Derivatives liabilities	155,510	155,510	122,896	122,896
Financial liabilities measured at amortized cost(*2)				
Trade accounts and notes payable	3,477,679	3,477,679	4,117,798	4,117,798
Borrowings	21,063,657	21,217,415	22,704,998	22,956,571
Financial guarantee liabilities	88,407	88,407	108,161	108,161
Others	1,865,683	1,865,683	2,007,114	2,007,114
	<u>₩ 26,495,426</u>	<u>26,649,184</u>	<u>28,938,071</u>	<u>29,189,644</u>

(*1) Available-for-sale financial assets which are not measured at fair value are not included.

(*2) The fair value of financial assets and liabilities measured at amortized cost is measured using discounted cash flow method, and the fair value is mainly calculated for the disclosures in the note. On the other hand, the Company has not performed fair value measurement for the financial assets and liabilities measured at amortized cost except borrowings which are classified as fair value hierarchy level 2 since their carrying amounts approximate fair value.

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2) The fair values of financial assets and financial liabilities by fair value hierarchy as of December 31, 2017 and 2016 are as follows:

① December 31, 2017

<i>(in millions of Won)</i>		Level 1	Level 2	Level 3	Total
Financial assets					
Available-for-sale financial assets	₩	1,080,291	17,812	351,419	1,449,522
Financial assets held for trading		-	1,970	-	1,970
Derivatives assets		-	68,290	-	68,290
		<u>1,080,291</u>	<u>88,072</u>	<u>351,419</u>	<u>1,519,782</u>
Financial liabilities					
Derivatives liabilities	₩	-	155,510	-	155,510

② December 31, 2016

<i>(in millions of Won)</i>		Level 1	Level 2	Level 3	Total
Financial assets					
Available-for-sale financial assets	₩	1,800,943	-	338,744	2,139,687
Derivatives assets		-	137,236	10,346	147,582
		<u>1,800,943</u>	<u>137,236</u>	<u>349,090</u>	<u>2,287,269</u>
Financial liabilities					
Derivatives liabilities	₩	-	122,896	-	122,896

3) Financial assets and financial liabilities classified as fair value hierarchy level 2

Fair values of derivatives are measured using the derivatives instrument valuation model such as market approach method and discounted cash flow method. Inputs of the financial instrument valuation model include forward rate, interest rate and others. It may change depending on the type of derivatives and the nature of the underlying assets.

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4) Financial assets and financial liabilities classified as fair value hierarchy level 3

- ① Value measurement method and significant but not observable inputs for the financial assets classified as fair value hierarchy level 3 as of December 31, 2017 are as follows:

(in millions of Won)

	Fair value	Valuation technique	Inputs	Range of inputs	Effect on fair value assessment with unobservable input
Available-for-sale financial assets	₩ 235,803	Discounted cash flows	Growth rate	0% ~ 2.0%	As growth rate increases, fair value increases
			Discount rate	0.5% ~ 11.9%	As discount rate increases, fair value decreases
	14,775	Peer group usage	PER	1.085 ~ 5.245	As PER increases, fair value increases
	100,841	Asset value approach	-	-	-

- ② Sensitivity analysis of financial assets and financial liabilities classified as Level 3 of fair value hierarchy

If other inputs remain constant as of December 31, 2017 and one of the significant but not observable input is changed, the effect on fair value measurement is as follows:

(in millions of Won)

	Input variable	Favorable changes	Unfavorable changes
Available-for-sale financial assets	Fluctuation 0.5% of growth rate	₩ 5,713	4,641
	Fluctuation 0.5% of discount rate	27,238	22,724

- ③ Changes in fair value of financial assets and financial liabilities classified as Level 3 for the years ended December 31, 2017 and 2016 were as follows:

(in millions of Won)

	2017	2016
Beginning	₩ 349,090	466,407
Acquisition	129,766	47,493
Gain or losses valuation of derivatives	(10,346)	(59,829)
Other comprehensive income (loss)	35,126	(38,731)
Impairment	(107,934)	(19,111)
Disposal and others	(44,283)	(47,139)
Ending	₩ 351,419	349,090

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24. Share Capital and Capital Surplus

(a) Share capital as of December 31, 2017 and 2016 are as follows:

<i>(Share, in Won)</i>	2017	2016
Authorized shares	200,000,000	200,000,000
Par value	₩ 5,000	5,000
Issued shares(*1)	87,186,835	87,186,835
Shared capital(*2)	₩ 482,403,125,000	482,403,125,000

(*1) As of December 31, 2017, total shares of ADRs of 36,840,292 outstanding in overseas stock market are equivalent to 9,210,073 of common stock.

(*2) As of December 31, 2017, the difference between the ending balance of common stock and the par value of issued common stock is ₩46,469 million due to retirement of 9,293,790 treasury stocks.

(b) The changes in issued common stock for the years ended December 31, 2017 and 2016 were as follows:

<i>(share)</i>	2017			2016		
	Issued shares	Treasury shares	Number of Outstanding shares	Issued shares	Treasury shares	Number of Outstanding shares
Beginning	87,186,835	(7,189,170)	79,997,665	87,186,835	(7,191,187)	79,995,648
Disposal of treasury shares	-	1,939	1,939	-	2,017	2,017
Ending	87,186,835	(7,187,231)	79,999,604	87,186,835	(7,189,170)	79,997,665

(c) Capital surplus as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>	2017	2016
Share premium	₩ 463,825	463,825
Gain on disposal of treasury shares	783,914	783,788
Other capital surplus	164,826	150,178
	₩ 1,412,565	1,397,791

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(d) During the year ended December 31, 2017, POSCO Energy Co., Ltd., a subsidiary of the Company, issued redeemable convertible preferred shares which are classified as non-controlling interests in the consolidated financial statements. The details of redeemable convertible preferred shares as of December 31, 2017 are as follows:

<i>(Share, in Won)</i>	Redeemable Convertible Preferred Shares
Issue date	February 25, 2017
Number of shares issued	8,643,193 shares
Price per share	₩28,346
Voting rights	No voting rights for 3 years from issue date
Dividend rights	Comparative, Non-participating · Minimum dividend rate for 1~3 years : 3.98% · Minimum dividend rate after 4 years : Comparative rate + Issuance spread + 2%
Details about Redemption	Issuer can demand redemption of all or part of redeemable convertible preferred shares every year after the issue date, for a period of 10 years from the issue date.
Details about Conversion	Stockholders of redeemable convertible preferred shares can convert them to common shares from 3 years after the issue date to the end of the redemption period (10 years).

Redeemable convertible preferred stocks are classified as non-controlling interests in the consolidated financial statements since the issuer has a redemption right and can control the circumstances in which the entity can settle with a variable quantity of equity instruments.

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25. Hybrid Bonds

(a) Hybrid bonds classified as equity as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>	Date of issue	Date of maturity	Interest rate (%)		2017	2016
Hybrid bond 1-1(*1)	2013-06-13	2043-06-13	4.30	₩	800,000	800,000
Hybrid bond 1-2(*1)	2013-06-13	2043-06-13	4.60		200,000	200,000
Issuance cost					(3,081)	(3,081)
				₩	<u>996,919</u>	<u>996,919</u>

(*1) Details of issuance of hybrid bonds as of December 31, 2017 are as follows:

<i>(in millions of Won)</i>	Hybrid bond 1-1	Hybrid bond 1-2
Issue price	800,000	200,000
Maturity date	30 years (The Company has a right to extend the maturity date)	
Interest rate	Issue date ~ 2018-06-12 : 4.30% Reset every 5 years as follows; · After 5 years : return on government bond (5 years) + 1.30% · After 10 years : additionally +0.25% according to Step-up clauses · After 25 years : additionally +0.75%	Issue date ~ 2023-06-12 : 4.60% Reset every 10 years as follows; · After 10 years : return on government bond (10 years) + 1.40% · After 10 years : additionally +0.25% according to Step-up clauses · After 30 years : additionally +0.75%
Interest payments condition	Quarterly (Optional deferral of interest payment is available to the Company)	
Others	The Company can call the hybrid bond at year 5 and interest payment date afterwards	The Company can call the hybrid bond at year 10 and interest payment date afterwards

The interest accumulated but not paid on the hybrid bonds as of December 31, 2017 amounts to ₩2,389 million.

(b) POSCO ENERGY Co., Ltd., a subsidiary of the Company, issued hybrid bonds, which are classified as non-controlling interests in the consolidated financial statements. Hybrid bonds as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>	Date of issue	Date of maturity	Interest rate (%)		2017	2016
Hybrid bond 1-1(*1)	2013-08-29	2043-08-29	4.66	₩	165,000	165,000
Hybrid bond 1-2(*1)	2013-08-29	2043-08-29	4.72		165,000	165,000
Hybrid bond 1-3(*1)	2013-08-29	2043-08-29	4.72		30,000	30,000
Hybrid bond 1-4(*1)	2013-08-29	2043-08-29	5.21		140,000	140,000
Issuance cost					(1,532)	(1,532)
				₩	<u>498,468</u>	<u>498,468</u>

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(*1) Details of issuance of hybrid bonds of POSCO ENERGY Co., Ltd. as of December 31, 2017 are as follows:

<i>(in millions of Won)</i>	Hybrid bond 1-1	Hybrid bond 1-2 and 1-3	Hybrid bond 1-4
Issue price	165,000	195,000	140,000
Maturity date	30 years (The Company has a right to extend the maturity date)		
Interest rate	Issue date ~ 2018-08-29 : 4.66% Reset every 5 years as follows; · After 5 years : return on government bond (5 years) + 1.39% · After 10 years : additionally +0.25% according to Step-up clauses · After 25 years : additionally +0.75%	Issue date ~ 2018-08-29 : 4.72% Reset every 5 years as follows; · After 5 years : return on government bond (5 years) + 1.45% · After 10 years : additionally +0.25% according to Step-up clauses · After 25 years : additionally +0.75%	Issue date ~ 2023-08-29 : 5.21% Reset every 10 years as follows; · After 10 years : return on government bond (10 years) + 1.55% · After 10 years : additionally +0.25% according to Step-up clauses · After 30 years : additionally +0.75%
Interest payments condition	Quarterly (Except hybrid bond 1-3, optional deferral of interest payment is available to the Company)		
Others	The Company can call the hybrid bond at year 5 and interest payment date afterwards		The Company can call the hybrid bond at year 10 and interest payment date afterwards

The interest accumulated but not paid on the hybrid bonds as of December 31, 2017 amounts to ₩2,004 million.

26. Reserves

(a) Reserves as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>	2017	2016
Accumulated comprehensive loss of investments in associates and joint ventures	₩ (516,528)	(301,734)
Changes in unrealized fair value of available-for-sale investments	230,190	276,143
Currency translation differences	(372,166)	(99,264)
Gain or losses on valuation of derivatives	(136)	-
Others	(23,916)	(19,130)
	₩ (682,556)	(143,985)

(b) Changes in unrealized fair value of available-for-sale investments for the years ended December 31, 2017 and 2016 were as follows:

<i>(in millions of Won)</i>	2017	2016
Beginning balance	₩ 276,143	(38,294)
Changes in the unrealized fair value of available-for-sale investments	183,761	218,542
Reclassification to profit or loss upon disposal	(299,862)	(88,781)
Impairment of available-for-sale investments	96,083	187,108
Others	(25,935)	(2,432)
Ending balance	₩ 230,190	276,143

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27. Treasury Shares

Based on the Board of Directors' resolution, POSCO holds treasury shares for business purposes including price stabilization. The changes in treasury shares for the years ended December 31, 2017 and 2016 were as follows:

<i>(shares, in millions of Won)</i>	2017		2016	
	Number of shares	Amount	Number of shares	Amount
Beginning	7,189,170	₩ 1,533,468	7,191,187	₩ 1,533,898
Disposal of treasury shares	(1,939)	(414)	(2,017)	(430)
Ending	7,187,231	₩ 1,533,054	7,189,170	₩ 1,533,468

28. Revenue

Details of revenue for the years ended December 31, 2017 and 2016 were as follows:

<i>(in millions of Won)</i>	2017	2016
Sale of goods	₩ 51,357,709	43,683,169
Services	2,064,583	2,276,534
Construction revenue	6,767,716	6,641,465
Rental income	6,370	8,930
Others	458,722	473,415
	₩ 60,655,100	53,083,513

29. Construction Contracts

(a) Details of in-progress construction contracts as of December 31, 2017 and 2016 are as follows:

<i>(in millions of Won)</i>	2017		2016	
	Construction segment	Others	Construction segment	Others
Accumulated cost	₩ 22,513,972	277,088	22,493,050	313,422
Add: Accumulated profit	1,811,066	45,037	1,574,858	48,119
Less: Accumulated loss	(704,234)	(14,359)	(1,115,245)	(23,920)
Accumulated revenue	23,620,804	307,766	22,952,663	337,621
Less: Progress billings	(23,601,381)	(299,757)	(23,157,151)	(338,991)
Others	884	110	2,909	7,052
	₩ 20,307	8,119	(201,579)	5,682

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- (b) Details of due from customers for contract work and due to customers for contract work related to construction as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	2017		2016	
	Construction segment	Others	Construction segment	Others
Due from customers for contract work	₩ 800,359	49,942	894,181	70,123
Due to customers for contract work	(780,052)	(41,823)	(1,095,760)	(64,441)
	₩ 20,307	8,119	(201,579)	5,682

- (c) Details of the provisions of construction loss, the allowance for due from customers and the accounts receivable of construction as of December 31, 2017 and December 31, 2016 are as follows:

(in millions of Won)

	2017	2016
Construction segment	₩ 66,442	143,159
Others	1,232	3,524
	₩ 67,674	146,683

- (d) Due to the factors causing the variation of costs for the year ended December 31, 2017, the estimated total contract costs have changed. Details of changes in estimated total contract costs and the impact on profits or loss for the year ended December 31, 2017 and future periods are as follows:

(in millions of Won)

	Changes in estimated total contract costs	Changes in profit (loss) of construction contract		
		2017	Future periods	Total
Construction segment	₩ 151,996	(68,838)	(7,838)	(76,676)
Others	10,376	1,232	1,870	3,102
	₩ 162,372	(67,606)	(5,968)	(73,574)

The effect on the current and future profit is estimated based on the circumstances that have occurred from the commencement date of the contract to the end of 2017. The estimation is evaluated for the total contract cost and expected total contract revenue as of the end of the period. Also, it may change during future periods.

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(e) Uncertainty of estimates

1) Total contract revenues

Total contract revenues are measured based on contractual amount initially agreed. However, the contract revenues can increase due to additional contract work, claims and incentive payments in the course of construction, or decrease due to penalty when the completion of contract is delayed due to the Company's fault. Therefore, this measurement of contract revenues is affected by the uncertainty of the occurrence of future events.

2) Total contract costs

Construction revenues are recognized based on the percentage of completion, which is measured on the basis of the gross amount incurred to date. Total contract costs are estimated based on estimates of future material costs, labor costs, outsourcing cost and others. There is uncertainty in future estimates due to various internal and external factors such as fluctuation of market, the risk of business partner and the experience of project performance and others. The significant assumptions including uncertainty of the estimate of total contract costs are as follows:

	Method of significant assumption
Material cost	Assumption based on recent purchasing price and quoted market price
Labor cost	Assumption based on standard monthly and daily labor cost
Outsourcing cost	Assumption based on the past experience rate of similar project and market price

Management reviews the assumptions used in estimated contract costs at each reporting period end and adjusts them, if necessary.

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30. Selling and Administrative Expenses

(a) Administrative expenses

Administrative expenses for the years ended December 31, 2017 and 2016 were as follows:

<i>(in millions of Won)</i>	2017	2016
Wages and salaries	₩ 774,900	769,589
Expenses related to post-employment benefits	78,654	200,956
Other employee benefits	159,920	176,794
Travel	39,790	40,828
Depreciation	97,261	103,442
Amortization	146,314	139,569
Communication	11,740	11,186
Electricity expenses	7,050	7,527
Taxes and public dues	72,826	78,895
Rental	69,976	82,005
Repairs	9,859	11,316
Entertainment	11,582	13,157
Advertising	119,724	86,141
Research & development	125,795	120,608
Service fees	193,387	201,129
Vehicles maintenance	8,211	10,090
Industry association fee	10,140	13,468
Conference	14,494	13,108
Increase in provisions	10,990	6,532
Bad debt expenses	173,694	165,150
Others	40,493	40,050
	₩ <u>2,176,800</u>	<u>2,291,540</u>

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(b) Selling expenses

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

<i>(in millions of Won)</i>	2017	2016
Freight and custody expenses	₩ 1,336,969	1,342,009
Operating expenses for distribution center	10,503	10,315
Sales commissions	115,925	94,377
Sales advertising	3,800	5,117
Sales promotion	12,414	10,670
Sample	1,989	2,335
Sales insurance premium	36,546	31,379
Contract cost	23,061	49,480
Others	16,070	8,004
	<u>₩ 1,557,277</u>	<u>1,553,686</u>

31. Research and Development Expenditures Recognized as Expenses

Research and development expenditures recognized as expenses for the years ended December 31, 2017 and 2016 were as follows:

<i>(in millions of Won)</i>	2017	2016
Administrative expenses	₩ 125,795	120,608
Cost of sales	361,093	324,190
	<u>₩ 486,888</u>	<u>444,798</u>

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32. Finance Income and Costs

Details of finance income and costs for the years ended December 31, 2017 and 2016 were as follows:

(in millions of Won)

	2017	2016
Finance income		
Interest income	₩ 212,451	182,475
Dividend income	92,962	41,000
Gain on foreign currency transactions	785,616	1,032,552
Gain on foreign currency translations	564,016	377,723
Gain on derivatives transactions	210,727	316,524
Gain on valuations of derivatives	64,735	147,111
Gain on disposals of available-for-sale financial assets	425,684	130,830
Others	16,476	3,765
	₩ <u>2,372,667</u>	<u>2,231,980</u>
Finance costs		
Interest expenses	₩ 653,115	658,726
Loss on foreign currency transactions	756,654	1,147,192
Loss on foreign currency translations	422,880	405,391
Loss on derivatives transactions	236,273	338,314
Loss on valuation of derivatives	226,487	162,676
Impairment loss on available-for-sale financial assets	123,214	248,404
Others	65,654	53,487
	₩ <u>2,484,277</u>	<u>3,014,190</u>

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33. Other Non-Operating Income and Expenses

Details of other non-operating income and expenses for the years ended December 31, 2017 and 2016 were as follows:

(in millions of Won)

	2017	2016
Other non-operating income		
Gain on disposals of assets held for sale	₩ 1,180	23,112
Gain on disposals of investment in subsidiaries, associates and joint ventures	81,794	23,305
Gain on disposals of property, plant and equipment	32,145	23,826
Gain on disposals of intangible assets	23,391	671
Recovery of allowance for other doubtful accounts	2,743	12,658
Profit on valuation of firm commitment	56,301	-
Rental revenues	1,498	1,771
Gain on insurance proceeds	5,878	22,400
Others(* 1)	246,294	107,393
	<u>₩ 451,224</u>	<u>215,136</u>
Other non-operating expenses		
Impairment loss on assets held for sale	₩ -	24,890
Loss on disposals of investment in subsidiaries, associates and joint ventures	19,985	22,499
Loss on disposals of property, plant and equipment	151,343	86,622
Impairment loss on property, plant and equipment	117,231	196,882
Impairment loss on goodwill and intangible assets	167,995	127,875
Other bad debt expenses	100,920	50,225
Loss on valuation of firm commitment	43,164	-
Idle tangible asset expenses	10,490	6,437
Increase to provisions	33,964	53,058
Donations	51,424	43,810
Others	95,780	143,422
	<u>₩ 792,296</u>	<u>755,720</u>

(*1) The Company has recognized the refund of VAT and others amounting to ₩160,501 million as non-operating income in 2017, based on the result of the tax amounts to be refunded when the result of the Company's appeal in connection with the additional income tax payment in prior years tax audits for rectification were finalized.

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34. Expenses by Nature

Expenses that are recorded by nature as cost of sales, selling and administrative expenses and other non-operating expenses in the statements of comprehensive income for the years ended December 31, 2017 and 2016 were as follows (excluding finance costs and income tax expense):

<i>(in millions of Won)</i>	2017	2016
Raw material used,		
changes in inventories and others	₩ 35,967,776	30,300,229
Employee benefits expenses(*2)	3,357,861	3,444,276
Outsourced processing cost	7,074,948	7,678,055
Electricity expenses	933,045	1,018,429
Depreciation(*1)	2,887,646	2,835,843
Amortization	409,774	378,004
Freight and custody expenses	1,336,969	1,342,009
Sales commissions	115,925	94,377
Loss on disposal of property, plant and equipment	151,343	86,622
Impairment loss on property, plant and equipment	117,231	196,882
Impairment loss on goodwill and intangible assets	167,995	127,875
Contribution to provisions	215,383	189,914
Donations	51,424	43,810
Others	4,038,241	3,258,583
	₩ <u>56,825,561</u>	<u>50,994,908</u>

(*1) Includes depreciation expense of investment property.

(*2) The details of employee benefits expenses for the years ended December 31, 2017 and 2016 were as follows:

<i>(in millions of Won)</i>	2017	2016
Wages and salaries	₩ 3,105,364	3,016,488
Expenses related to post-employment benefits	252,497	427,788
	₩ <u>3,357,861</u>	<u>3,444,276</u>

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35. Income Taxes

(a) Income tax expense for the years ended December 31, 2017 and 2016 was as follows:

<i>(in millions of Won)</i>	2017	2016
Current income taxes	₩ 864,143	699,269
Deferred income tax due to temporary differences	320,520	(204,565)
Items recorded directly in equity	21,560	(110,019)
Income tax expense	₩ <u>1,206,223</u>	<u>384,685</u>

(b) The income taxes credited (charged) directly to equity for the years ended December 31, 2017 and 2016 were as follows:

<i>(in millions of Won)</i>	2017	2016
Net changes in the unrealized fair value of available-for-sale investments	₩ 1,271	(100,550)
Gain on sale of treasury shares	(40)	(10)
Others	20,329	(9,459)
	₩ <u>21,560</u>	<u>(110,019)</u>

(c) The following table reconciles the calculated income tax expense based on POSCO's statutory rate (24.2%) to the actual amount of taxes recorded by the Company for the years ended December 31, 2017 and 2016.

<i>(in millions of Won)</i>	2017	2016
Profit before income tax expense	₩ 4,179,692	1,432,854
Income tax expense computed at statutory rate	1,011,023	346,289
Adjustments:		
Tax credits	(40,757)	(30,124)
Over provisions from prior years	(20,912)	(11,829)
Investment in subsidiaries, associates and joint ventures	(12,510)	76,751
Tax effects due to permanent differences	72,421	(9,962)
Effect of tax rate change	175,647	-
Others	21,311	13,560
	<u>195,200</u>	<u>38,396</u>
Income tax expense	₩ <u>1,206,223</u>	<u>384,685</u>
Effective tax rate (%)	28.9%	26.8%

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(d) The movements in deferred tax assets (liabilities) for the years ended December 31, 2017 and 2016 were as follows:

(in millions of Won)

	2017			2016		
	Beginning	Inc. (Dec.)	Ending	Beginning	Inc. (Dec.)	Ending
Deferred income tax						
due to temporary differences						
Allowance for doubtful accounts	₩ 213,119	60,875	273,994	202,592	10,527	213,119
Reserve for technology developments	(91,960)	53,973	(37,987)	(177,676)	85,716	(91,960)
PP&E - Depreciation	(11,639)	26,280	14,641	(15,240)	3,601	(11,639)
Share of profit or loss of equity-accounted investees	70,259	125,783	196,042	(45,174)	115,433	70,259
Allowance for inventories valuation	15,651	(4,871)	10,780	13,373	2,278	15,651
PP&E - Revaluation	(1,524,149)	(304,015)	(1,828,164)	(1,393,501)	(130,648)	(1,524,149)
Prepaid expenses	19,665	335	20,000	19,180	485	19,665
PP&E - Impairment loss	5,295	245	5,540	8,055	(2,760)	5,295
Gain or loss on foreign currency translation	(5,957)	(42,515)	(48,472)	(29,355)	23,398	(5,957)
Defined benefit obligations	361,838	68,279	430,117	354,175	7,663	361,838
Plan assets	(316,525)	(36,129)	(352,654)	(287,839)	(28,686)	(316,525)
Provision for construction losses	997	(556)	441	612	385	997
Provision for construction warranty	24,322	4,395	28,717	21,604	2,718	24,322
Accrued income	(9,441)	(3,474)	(12,915)	(8,982)	(459)	(9,441)
Impairment loss on AFS	245,168	(42,373)	202,795	266,474	(21,306)	245,168
Difference in acquisition costs of treasury shares	62,099	8,448	70,547	62,116	(17)	62,099
Others	380,403	(48,224)	332,179	278,002	102,401	380,403
	<u>(560,855)</u>	<u>(133,544)</u>	<u>(694,399)</u>	<u>(731,584)</u>	<u>170,729</u>	<u>(560,855)</u>
Deferred income taxes recognized directly to equity						
Loss (gain) on valuation of available-for-sale investments	(50,507)	1,271	(49,236)	50,043	(100,550)	(50,507)
Others	51,832	20,329	72,161	61,291	(9,459)	51,832
	<u>1,325</u>	<u>21,600</u>	<u>22,925</u>	<u>111,334</u>	<u>(110,009)</u>	<u>1,325</u>
Deferred tax from tax credit						
Tax credit carry-forward and others	307,335	(189,303)	118,032	277,261	30,074	307,335
Investments in subsidiaries, associates and joint ventures						
Investments in subsidiaries, associates and joint ventures	86,129	(17,703)	68,426	(18,088)	104,217	86,129
₩	<u>(166,066)</u>	<u>(318,950)</u>	<u>(485,016)</u>	<u>(361,077)</u>	<u>195,011</u>	<u>(166,066)</u>

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(e) Deferred tax assets and liabilities for the years ended December 31, 2017 and 2016 are as follows:

(in millions of Won)

	2017			2016		
	Assets	Liabilities	Net	Assets	Liabilities	Net
Deferred income tax due to temporary differences						
Allowance for doubtful accounts	₩ 273,994	-	273,994	213,119	-	213,119
Reserve for technology developments	-	(37,987)	(37,987)	-	(91,960)	(91,960)
PP&E - Depreciation	59,912	(45,271)	14,641	50,843	(62,482)	(11,639)
Share of profit or loss of equity-accounted investees	236,637	(40,595)	196,042	178,538	(108,279)	70,259
Allowance for inventories valuation	10,780	-	10,780	15,651	-	15,651
PP&E - Revaluation	-	(1,828,164)	(1,828,164)	-	(1,524,149)	(1,524,149)
Prepaid expenses	20,000	-	20,000	19,665	-	19,665
PP&E - Impairment loss	5,639	(99)	5,540	5,397	(102)	5,295
Gain or loss on foreign currency translation	113,760	(162,232)	(48,472)	99,836	(105,793)	(5,957)
Defined benefit obligations	430,117	-	430,117	361,838	-	361,838
Plan assets	-	(352,654)	(352,654)	-	(316,525)	(316,525)
Provision for construction losses	441	-	441	997	-	997
Provision for construction warranty	28,717	-	28,717	24,322	-	24,322
Accrued income	-	(12,915)	(12,915)	-	(9,441)	(9,441)
Impairment loss on AFS	202,795	-	202,795	245,168	-	245,168
Difference in acquisition costs of treasury shares	70,547	-	70,547	62,099	-	62,099
Others	429,196	(97,017)	332,179	429,079	(48,676)	380,403
	<u>1,882,535</u>	<u>(2,576,934)</u>	<u>(694,399)</u>	<u>1,706,552</u>	<u>(2,267,407)</u>	<u>(560,855)</u>
Deferred income taxes recognized directly to equity						
Loss (gain) on valuation of available-for-sale investments	110,865	(160,101)	(49,236)	50,245	(100,752)	(50,507)
Others	92,981	(20,820)	72,161	65,532	(13,700)	51,832
	<u>203,846</u>	<u>(180,921)</u>	<u>22,925</u>	<u>115,777</u>	<u>(114,452)</u>	<u>1,325</u>
Deferred tax from tax credit						
Tax credit carry-forward and others	118,032	-	118,032	307,335	-	307,335
Investments in subsidiaries, associates and joint ventures						
Investments in subsidiaries, associates and joint ventures	563,406	(494,980)	68,426	561,505	(475,376)	86,129
	<u>₩ 2,767,819</u>	<u>(3,252,835)</u>	<u>(485,016)</u>	<u>2,691,169</u>	<u>(2,857,235)</u>	<u>(166,066)</u>

(f) As of December 31, 2017, the Company did not recognize income tax effects associated with deductible temporary differences of ₩5,300,667 million mainly relating to loss of subsidiaries and affiliates because realization is not considered probable. As of December 31, 2017, the Company did not recognize income tax effects associated with taxable temporary differences of ₩4,362,127 million mainly relating to increase in retained earnings of subsidiaries since it is probable that the temporary difference will not reverse in the foreseeable future.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

36. Earnings per Share

Basic and diluted earnings per share for the years ended December 31, 2017 and 2016 were as follows:

(in Won, except per share information)

		<u>2017</u>	<u>2016</u>
Profit attribute to controlling interest	₩	2,790,105,745,202	1,363,309,633,135
Interests of hybrid bonds		(33,048,799,997)	(33,225,163,081)
Weighted-average number of common shares outstanding (*1)		<u>79,998,600</u>	<u>79,996,389</u>
Basic and diluted earnings per share	₩	<u>34,464</u>	<u>16,627</u>

(*1) The weighted-average number of common shares used to calculate basic and diluted earnings per share are as follows:

<i>(shares)</i>		<u>2017</u>	<u>2016</u>
Total number of common shares issued		87,186,835	87,186,835
Weighted-average number of treasury shares		<u>(7,188,235)</u>	<u>(7,190,446)</u>
Weighted-average number of common shares outstanding		<u>79,998,600</u>	<u>79,996,389</u>

Since there were no potential shares of common stock which had dilutive effects as of December 31, 2017 and 2016, diluted earnings per share is equal to basic earnings per share.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

37. Related Party Transactions

(a) Significant transactions between the controlling company and related companies for the years ended December 31, 2017 and 2016 were as follows:

1) For the year ended December 31, 2017

(in millions of Won)

	Sales and others(*1)		Purchase and others(*2)			
	Sales	Others	Purchase of material	Purchase of fixed assets	Outsourced processing cost	Others
Subsidiaries(*3)						
POSCO ENGINEERING & CONSTRUCTION CO., LTD. ₩	3,328	71	-	151,639	32	18,352
POSCO Processing&Service	298,781	1	113,628	4,595	8,309	404
POSCO COATED & COLOR STEEL Co., Ltd.	417,369	3,533	-	-	8,483	106
POSCO ICT(*4)	1,697	5,097	-	315,748	29,773	183,226
eNtoB Corporation	1	30	330,921	8,215	139	26,023
POSCO CHEMTECH	359,862	33,076	479,896	23,043	296,296	6,860
POSCO ENERGY CO., LTD.	179,966	1,456	-	-	-	2
POSCO DAEWOO Corporation	5,214,127	35,182	550,258	221	44,108	1,948
POSCO Thainox Public Company Limited	218,005	9,780	10,168	-	-	-
POSCO America Corporation	345,225	-	90	-	-	1,776
POSCO Canada Ltd.	439	690	278,915	-	-	-
POSCO Asia Co., Ltd.	1,949,354	1,454	365,025	337	1,625	4,982
Qingdao Pohang Stainless Steel Co., Ltd.	161,803	-	-	-	-	176
POSCO JAPAN Co., Ltd.	1,436,159	20	26,256	621	-	44,829
POSCO-VIETNAM Co., Ltd.	212,883	-	-	-	-	7
POSCO MEXICO S.A. DE C.V.	276,387	-	-	-	-	1,749
POSCO Maharashtra Steel Private Limited	467,206	-	-	-	-	65
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	192,467	-	-	-	-	-
Others	932,048	10,073	262,828	25,270	240,687	118,665
	<u>12,667,107</u>	<u>100,463</u>	<u>2,417,985</u>	<u>529,689</u>	<u>629,452</u>	<u>409,170</u>
Associates and joint ventures(*3)						
POSCO PLANTEC Co., Ltd.	2,947	112	5,487	300,041	20,718	19,763
SNNC	6,734	712	554,151	-	-	4
POSCO-SAMSUNG-Slovakia Processing Center	52,779	-	-	-	-	-
Roy Hill Holdings Pty Ltd	-	-	697,096	-	-	-
CSP - Compania Siderurgica do Pecem	7,384	-	159,501	-	-	-
Others	14,943	52,583	79,103	-	-	3
	<u>84,787</u>	<u>53,407</u>	<u>1,495,338</u>	<u>300,041</u>	<u>20,718</u>	<u>19,770</u>
₩	<u>12,751,894</u>	<u>153,870</u>	<u>3,913,323</u>	<u>829,730</u>	<u>650,170</u>	<u>428,940</u>

(*1) Sales and others mainly consist of sales of steel products to subsidiaries, associates and joint ventures.

(*2) Purchases and others mainly consist of subsidiaries' purchases of construction services and purchases of raw materials to manufacture steel products.

(*3) As of December 31, 2017, the Company provided guarantees to related parties (Note 38).

(*4) Others (purchase) mainly consist of service fees related to maintenance and repair of ERP System.

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2017

2) For the year ended December 31, 2016

(in millions of Won)

	Sales and others		Purchase and others			
	Sales	Others	Purchase of material	Purchase of fixed assets	Outsourced processing cost	Others
Subsidiaries						
POSCO ENGINEERING & CONSTRUCTION CO., LTD. ₩	29,511	16,661	8	183,768	-	24,511
POSCO Processing&Service	1,212,220	5,778	549,803	2,896	22,704	2,445
POSCO COATED & COLOR STEEL Co., Ltd.	326,078	2,560	-	-	12,232	126
POSCO ICT	1,224	727	-	219,301	32,456	171,107
eNtoB Corporation	-	5	278,016	9,836	212	19,436
POSCO CHEMTECH	319,164	33,784	502,448	14,847	290,427	5,139
POSCO ENERGY CO., LTD.	187,311	1,382	-	-	-	7
POSCO TMC Co., Ltd.(*1)	219,489	-	2	-	863	1,177
POSCO AST(*1)	152,098	1	-	-	19,695	922
POSCO DAEWOO Corporation	3,227,716	34,341	92,203	-	343	-
POSCO Thainox Public Company Limited	237,471	2,915	9,593	-	19	548
POSCO America Corporation	469,543	-	284	-	-	1,103
POSCO Canada Ltd.	275	-	148,528	-	-	-
POSCO Asia Co., Ltd.	1,758,080	1,373	403,174	247	939	3,602
Qingdao Pohang Stainless Steel Co., Ltd.	135,405	-	-	-	-	525
POSCO JAPAN Co., Ltd.	1,112,489	128	23,217	3,744	345	3,841
POSCO-VIETNAM Co., Ltd.	226,063	445	-	-	-	-
POSCO MEXICO S.A. DE C.V.	274,210	462	-	-	-	-
POSCO Maharashtra Steel Private Limited	355,829	2,613	-	-	-	93
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	149,911	-	-	-	-	-
Others	766,263	22,717	207,601	62,202	212,344	145,562
	<u>11,160,350</u>	<u>125,892</u>	<u>2,214,877</u>	<u>496,841</u>	<u>592,579</u>	<u>380,144</u>
Associates and joint ventures(*3)						
SeAH Changwon Integrated Special Steel	28	-	1,095	-	627	-
POSCO PLANTEC Co., Ltd.	2,245	48	3,533	244,898	16,812	8,146
SNNC	6,004	1,042	487,395	-	-	2
POSCO-SAMSUNG-Slovakia Processing center	44,686	-	-	-	-	-
KOBRASCO	-	29,297	-	-	-	-
Others	26,625	13,122	175,246	-	-	-
	<u>79,588</u>	<u>43,509</u>	<u>667,269</u>	<u>244,898</u>	<u>17,439</u>	<u>8,148</u>
₩	<u>11,239,938</u>	<u>169,401</u>	<u>2,882,146</u>	<u>741,739</u>	<u>610,018</u>	<u>388,292</u>

(*1) During the year ended December 31, 2016, it was merged into POSCO Processing& Service.

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2017

(b) The related account balances of significant transactions between the controlling company and related companies as of December 31, 2017 and 2016 are as follows:

1) December 31, 2017

(in millions of Won)

	Receivables			Payables			
	Trade accounts and notes receivable	Others	Total	Trade accounts and notes payable	Accounts payable	Others	Total
Subsidiaries							
POSCO ENGINEERING & CONSTRUCTION CO., LTD. ₩	2	2,908	2,910	-	21,965	674	22,639
POSCO COATED & COLOR STEEL Co., Ltd.	58,184	324	58,508	-	5	504	509
POSCO ICT	55	217	272	1,458	72,586	27,009	101,053
eNtoB Corporation	-	-	-	12,252	31,899	20	44,171
POSCO CHEMTECH	61,810	3,589	65,399	51,774	20,313	17,568	89,655
POSCO ENERGY CO., LTD.	33,239	1,673	34,912	-	-	1,425	1,425
POSCO DAEWOO Corporation	483,915	12,739	496,654	10,213	2,145	5,794	18,152
POSCO Thainox Public Company Limited	57,826	-	57,826	1,204	-	-	1,204
POSCO America Corporation	5,365	-	5,365	-	-	-	-
POSCO Asia Co., Ltd.	404,857	541	405,398	9,811	24	-	9,835
Qingdao Pohang Stainless Steel Co., Ltd.	31,693	-	31,693	-	-	-	-
POSCO MEXICO S.A. DE C.V.	55,695	530	56,225	-	-	-	-
POSCO Maharashtra Steel Private Limited	392,630	5,733	398,363	-	-	-	-
Others	384,385	49,403	433,788	15,038	59,676	31,118	105,731
	<u>1,969,656</u>	<u>77,657</u>	<u>2,047,313</u>	<u>101,750</u>	<u>208,512</u>	<u>84,112</u>	<u>394,374</u>
Associates and jointventures							
POSCO PLANTEC Co., Ltd.	1,946	9	1,955	3,842	15,723	-	19,565
SNNC	648	61	709	49,506	3	-	49,509
Others	8,350	904	9,254	824	-	-	824
	<u>10,944</u>	<u>974</u>	<u>11,918</u>	<u>54,172</u>	<u>15,726</u>	<u>-</u>	<u>69,898</u>
₩	<u>1,980,600</u>	<u>78,631</u>	<u>2,059,231</u>	<u>155,922</u>	<u>224,238</u>	<u>84,112</u>	<u>464,272</u>

2) December 31, 2016

(in millions of Won)

	Receivables			Payables			
	Trade accounts and notes receivable	Others	Total	Trade accounts and notes payable	Accounts payable	Others	Total
Subsidiaries							
POSCO ENGINEERING & CONSTRUCTION CO., LTD. ₩	3	3,359	3,362	-	9,825	515	10,340
POSCO Processing&Service	207,744	178	207,922	1,085	5,367	5,184	11,636
POSCO COATED & COLOR STEEL Co., Ltd.	48,716	324	49,040	-	5	1,600	1,605
POSCO ICT	-	128	128	1,062	89,382	6,074	96,518
eNtoB Corporation	-	-	-	9,948	29,310	15	39,273
POSCO CHEMTECH	27,253	3,868	31,121	54,702	11,870	19,282	85,854
POSCO ENERGY CO., LTD.	18,701	2,012	20,713	-	-	1,425	1,425
POSCO DAEWOO Corporation	182,700	11,184	193,884	460	183	49	692
POSCO Thainox Public Company Limited	62,034	8	62,042	-	224	-	224
POSCO America Corporation	10,008	-	10,008	-	-	-	-
POSCO Asia Co., Ltd.	375,823	458	376,281	25,101	-	-	25,101
Qingdao Pohang Stainless Steel Co., Ltd.	25,386	-	25,386	-	5	-	5
POSCO MEXICO S.A. DE C.V.	114,166	1,024	115,190	-	-	-	-
POSCO Maharashtra Steel Private Limited	208,737	9,923	218,660	-	-	-	-
Others	333,031	64,526	397,557	17,374	46,455	26,974	90,803
	<u>1,614,302</u>	<u>96,992</u>	<u>1,711,294</u>	<u>109,732</u>	<u>192,626</u>	<u>61,118</u>	<u>363,476</u>
Associates and jointventures							
POSCO PLANTEC Co., Ltd.	30	9	39	2,125	39,647	-	41,772
SNNC	223	26	249	40,201	-	-	40,201
Others	800	1	801	991	17,885	-	18,676
	<u>1,053</u>	<u>36</u>	<u>1,089</u>	<u>43,317</u>	<u>57,332</u>	<u>-</u>	<u>100,649</u>
₩	<u>1,615,355</u>	<u>97,028</u>	<u>1,712,383</u>	<u>153,049</u>	<u>249,958</u>	<u>61,118</u>	<u>464,125</u>

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

(c) Significant transactions between the Company, excluding the controlling company, and related companies for the years ended December 31, 2017 and 2016 were as follows:

1) December 31, 2017

(in millions of Won)

	Sales and others		Purchase and others	
	Sales	Others	Purchase of material	Others
Associates and jointventures				
POSCO PLANTEC Co., Ltd.	₩ 19,513	-	98	8,113
New Songdo International City Development, LLC	223,567	13,207	-	49
SNNC	26,288	-	3,578	17,985
Chun-cheon Energy Co., Ltd	42,147	-	-	-
Noeul Green Energy	11,863	-	-	2,178
VSC POSCO Steel Corporation	19,404	-	188	-
USS-POSCO Industries	26,899	107	2,222	-
CSP - Companhia Siderurgica do Pecem	241,299	-	101,018	21,154
Zhongyue POSCO (Qinhuangdao)				
Tinplate Industrial Co., Ltd	38,484	-	47,241	-
LLP POSUK Titanium	-	-	3,972	-
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	4	-	20,145	-
POS-SEAHSTEELWIRE(TIANJIN)CO.,Ltd	20,004	-	-	-
PT. Batutua Tembaga Raya	-	-	21,024	-
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	34,088	-	192	-
Zhangjiagang Pohang Refractories Co., Ltd.	-	-	87	1,632
Sebang Steel	441	-	23,778	-
SHANGHAI WAIGAOQIAO FREE TRADE ZONE LANSHENG DAEWOO IN'L TRADING CO., LTD.	43,764	-	-	-
DMSA/AMSA	-	99	47,092	-
South-East Asia Gas Pipeline Company Ltd.	-	62,423	-	-
Others	272,107	43,126	19,520	19,483
₩	1,019,872	118,962	290,155	70,594

2) December 31, 2016

(in millions of Won)

	Sales and others		Purchase and others	
	Sales	Others	Purchase of material	Others
Associates and jointventures				
SeAH Changwon integrated Special Steel	₩ 16,294	-	22,029	-
POSCO PLANTEC Co., Ltd.	21,659	5	3,335	5,912
New Songdo International City Development, LLC	226,042	-	-	14
SNNC	29,330	-	21,479	9,494
Posco e&c Songdo International Building	4,245	-	-	16,219
Chun-cheon Energy Co., Ltd	288,307	-	-	-
Noeul Green Energy	107,268	-	-	-
Incheon-Gimpo Expressway Co., Ltd.	102,183	-	-	-
VSC POSCO Steel Corporation	43,650	47	479	-
USS-POSCO Industries	287,072	-	1,195	-
CSP - Companhia Siderurgica do Pecem	157,814	-	-	-
Zhongyue POSCO (Qinhuangdao)				
Tinplate Industrial Co., Ltd	61,844	-	57,179	-
LLP POSUK Titanium	-	-	14,575	-
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	-	-	24,365	-
POS-SEAHSTEELWIRE(TIANJIN)CO.,Ltd	15,759	-	-	-
PT. Batutua Tembaga Raya	-	-	13,079	-
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	31,711	-	65	-
Zhangjiagang Pohang Refractories Co., Ltd.	250	14	364	2,472
Sebang Steel	-	-	26,276	-
SHANGHAI WAIGAOQIAO FREE TRADE ZONE LANSHENG DAEWOO IN'L TRADING CO., LTD.	157,886	-	3,535	-
DMSA/AMSA	-	-	72,582	-
South-East Asia Gas Pipeline Company Ltd.	-	87,973	-	-
Others	195,139	11,184	16,664	1,801
₩	1,746,453	99,223	277,201	35,912

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

(d) The related account balances of significant transactions between the Company, excluding the controlling company, and related companies as of December 31, 2017 and December 31, 2016 are as follows:

1) December 31, 2017

(in millions of Won)

	Receivables(*1)				Payables		
	Trade accounts and notes receivable	Loan	Others	Total	Trade accounts and notes payable	Others	Total
Associates and joint ventures							
POSCO PLANTEC Co., Ltd.	₩ 2,287	-	5	2,292	3,442	5,595	9,037
New Songdo International City Development, LLC	484,038	282,775	1,696	768,509	-	7,146	7,146
Chun-cheon Energy Co., Ltd	-	-	21	21	-	9,617	9,617
VSC POSCO Steel Corporation	16	-	-	16	17	-	17
USS-POSCO Industries	-	-	4	4	-	-	-
Nickel Mining Company SAS	-	59,668	118	59,786	-	-	-
CSP - Compania Siderurgica do Pecem	380,180	-	13,443	393,623	-	29,700	29,700
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	2,108	5,357	6	7,471	2,449	-	2,449
PT. Batutua Tembaga Raya	24	29,048	-	29,072	-	-	-
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	8,067	5,357	32	13,456	107	-	107
SHANGHAI WAIGAOQIAO FREE TRADE ZONE LANSHENG DAEWOO IN'L TRADING CO., LTD.	715	-	-	715	-	526	526
DMSA/AMSA	-	69,713	4,443	74,156	-	-	-
South-East Asia Gas Pipeline Company Ltd.	-	229,880	-	229,880	-	-	-
Others	134,397	134,506	6,885	275,788	1,856	2,005	3,861
	₩ 1,011,832	816,304	26,653	1,854,789	7,871	54,589	62,460

(*1)As of December 31, 2017, the Company recognizes bad-debt allowance for receivables amounting to ₩4,217 million.

2) December 31, 2016

(in millions of Won)

	Receivables(*1)				Payables		
	Trade accounts and notes receivable	Loan	Others	Total	Trade accounts and notes payable	Others	Total
Associates and joint ventures							
POSCO PLANTEC Co., Ltd.	₩ 4,709	-	6	4,715	2,718	8,521	11,239
New Songdo International City Development, LLC	255,822	-	5,725	261,547	-	-	-
Chun-cheon Energy Co., Ltd	12,142	-	-	12,142	-	3,171	3,171
VSC POSCO Steel Corporation	5,265	-	-	5,265	-	-	-
USS-POSCO Industries	583	-	-	583	75	-	75
Nickel Mining Company SAS	133	60,425	116	60,674	-	-	-
AN KHANH NEW CITY DEVELOPMENT J.V CO., LTD.	62,814	60,425	1,643	124,882	-	875	875
CSP - Compania Siderurgica do Pecem	224,760	-	149,700	374,460	-	109,272	109,272
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	3,279	6,647	6	9,932	1,365	-	1,365
PT. Batutua Tembaga Raya	-	38,120	-	38,120	2,293	-	2,293
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	9,292	8,460	43	17,795	40	-	40
SHANGHAI WAIGAOQIAO FREE TRADE ZONE LANSHENG DAEWOO IN'L TRADING CO., LTD.	100,367	-	-	100,367	-	-	-
DMSA/AMSA	-	90,638	-	90,638	-	-	-
South-East Asia Gas Pipeline Company Ltd.	-	276,605	48	276,653	-	-	-
Others	184,402	142,812	6,593	333,807	4,615	750	5,365
	₩ 863,568	684,132	163,880	1,711,580	11,106	122,589	133,695

(*1)As of December 31, 2016, the Company recognizes bad-debt allowance for receivables amounting to ₩48,891 million.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

(e) Significant financial transactions between the Company, excluding the controlling company, and related companies for the years ended December 31, 2017 and 2016 were as follows:

1) December 31, 2017

(in millions of Won)

	<u>Beginning</u>	<u>Lend</u>	<u>Collect</u>	<u>Others(*4)</u>	<u>Ending</u>
Associates and joint ventures					
METAPOLIS Co.,Ltd.(*1)	₩ 13,270	-	-	(13,270)	-
New Songdo International City Development, LLC	-	484,644	(201,869)	-	282,775
GALE International Korea, LLC	-	2,000	-	-	2,000
DMSA/AMSA(*2)	90,638	2,956	-	(23,881)	69,713
South-East Asia Gas Pipeline Company Ltd.	276,605	28,967	(46,252)	(29,440)	229,880
PT. Batutua Tembaga Raya	38,120	-	-	(9,072)	29,048
PT. Tanggamus Electric Power	3,606	-	-	(409)	3,197
PT. Wampu Electric Power	5,761	-	-	(654)	5,107
PT. POSMI Steel Indonesia	4,834	-	-	(548)	4,286
Nickel Mining Company SAS	60,425	-	-	(757)	59,668
AN KHANH NEW CITY DEVELOPMENT J.V CO., LTD.(*1)	60,425	-	-	(60,425)	-
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	6,647	-	(577)	(713)	5,357
KRAKATAU POS-CHEM DONG-SUH CHEMICAL	7,251	-	-	(823)	6,428
Hamparan Mulya	3,626	-	(3,626)	-	-
POS-SEAHSTEELWIRE(TIANJIN)CO.,Ltd	5,438	-	(5,438)	-	-
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	8,460	-	(2,262)	(841)	5,357
POS-SeAH Steel Wire (Thailand) Co., Ltd.	7,251	-	(1,142)	319	6,428
AMCI (WA) PTY LTD	91,775	4,327	-	(4,041)	92,061
POS-AUSTEM YANTAI AUTOMOTIVE	-	-	-	5,357	5,357
POS-AUSTEM WUHAN AUTOMOTIVE	-	-	-	8,571	8,571
SAMHWAN VINA CO., LTD(*3)	-	-	-	1,071	1,071
	₩ <u>684,132</u>	<u>522,894</u>	<u>(261,166)</u>	<u>(129,556)</u>	<u>816,304</u>

(*1) During the year ended December 31, 2017, it was excluded from associates.

(*2) During the year ended December 31, 2017, loans amounting to ₩13,712 million have been converted to shares of DMSA/AMSA, and its amount is included in others.

(*3) During the year ended December 31, 2017, it was newly classified to associate.

(*4) Includes adjustments of foreign currency translation differences and others.

2) December 31, 2016

(in millions of Won)

	<u>Beginning</u>	<u>Lend</u>	<u>Collect</u>	<u>Others(*3)</u>	<u>Ending</u>
Associates and joint ventures					
METAPOLIS Co.,Ltd.	₩ 26,000	-	(12,730)	-	13,270
Posco e&c Songdo International Building(*1)	-	298,865	-	(298,865)	-
DMSA/AMSA(*2)	99,854	11,774	-	(20,990)	90,638
South-East Asia Gas Pipeline Company Ltd.	283,954	27,087	(43,080)	8,644	276,605
PT. Batutua Tembaga Raya	36,830	-	-	1,290	38,120
PT. Tanggamus Electric Power	2,359	1,174	-	73	3,606
PT. Wampu Electric Power	4,454	1,169	-	138	5,761
PT. POSMI Steel Indonesia	4,688	-	-	146	4,834
Nickel Mining Company SAS	17,580	40,594	-	2,251	60,425
POSK(Pinghu) Steel Processing Center Co., Ltd.	5,743	5,683	(11,366)	(60)	-
AN KHANH NEW CITY DEVELOPMENT J.V CO., LTD.	58,600	-	-	1,825	60,425
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	10,782	-	(4,471)	336	6,647
KRAKATAU POS-CHEM DONG-SUH CHEMICAL	-	6,959	-	292	7,251
Hamparan Mulya	3,516	-	-	110	3,626
POS-SEAHSTEELWIRE(TIANJIN)CO.,Ltd	5,274	-	-	164	5,438
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	11,720	-	(3,480)	220	8,460
POS-SeAH Steel Wire (Thailand) Co., Ltd.	-	6,959	-	292	7,251
AMCI (WA) PTY LTD	85,168	4,665	-	1,942	91,775
	₩ <u>656,522</u>	<u>404,929</u>	<u>(75,127)</u>	<u>(302,192)</u>	<u>684,132</u>

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

(*1) During the year ended December 31, 2016, it was classified as a subsidiary from an associate.

(*2) During the year ended December 31, 2016, loans amounting to ₩24,624 million have been converted to shares of DMSA/AMSA, and its amount is included in others.

(*3) Includes adjustments of foreign currency translation differences and others.

(f) For the years ended December 31, 2017 and 2016, details of compensation to key management officers were as follows:

<i>(in millions of Won)</i>	<u>2017</u>	<u>2016</u>
Short-term benefits	₩ 112,688	90,916
Long-term benefits	8,632	17,905
Retirement benefits	20,422	17,870
	<u>₩ 141,742</u>	<u>126,691</u>

Key management officers include directors (including non-standing directors), executive officials and fellow officials who have significant influences and responsibilities in the Company's business and operations.

38. Commitments and Contingencies

(a) Contingent liabilities

Contingent liabilities may develop in a way not initially expected. Therefore, management continuously assesses contingent liabilities to determine whether an outflow of resources embodying economic benefits has become probable. If it becomes probable that an outflow of future economic benefits will be required for an item previously dealt with as a contingent liability, a provision is recognized in the consolidated financial statements of the period in which the change in probability occurs (except in the extremely rare circumstances where no reliable estimate can be made).

Management makes estimates and assumptions that affect disclosures of commitments and contingencies. All estimates and assumptions are based on the evaluation of current circumstances and appraisals with the supports of internal specialists or external consultants.

Management regularly analyzes current information about these matters and provides for probable contingent losses including the estimate of legal expense to resolve the matters. Internal and external lawyers are used for these assessments. In making the decision regarding the need for a provision, management considers whether the Company has an obligation as a result of a past event, whether it is probable that an outflow or cash or other resources embodying economic benefits will be required to settle the obligation and the ability to make a reliable estimate of the amount of the obligation.

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2017

(b) Details of guarantees

Contingent liabilities on outstanding guarantees and others provided by the Company as of December 31, 2017 are as follows.

Guarantors		Guarantee beneficiary	Financial institution	Guarantee limit		Guarantee amount		
				Foreign currency	Won equivalent	Foreign currency	Won equivalent	
<i>(in millions of Won)</i>								
[The Company]								
POSCO	POSCO Asia Co., Ltd.	BOC	USD	50,000,000	53,570	50,000,000	53,570	
	POSCO ASSAN TST STEEL INDUSTRY	SMBC and others	USD	146,527,500	156,990	131,874,750	141,291	
POSCO COATED STEEL (THAILAND) CO., LTD.	POSCO Maharashtra Steel Private Limited	The Great&CO Co.,Ltd (SPC) Export-Import Bank of Korea and others	THB	5,501,000,000	180,268	5,501,000,000	180,268	
	POSCO MEXICO S.A. DE C.V.	BOA and others	USD	649,853,000	696,252	323,918,500	347,045	
	POSCO SS-VINA CO., LTD.	Export-Import Bank of Korea and others	USD	160,000,000	171,424	160,000,000	171,424	
	POSCO VST CO., LTD.	ANZ and others	USD	354,351,050	379,652	314,599,225	337,062	
	POSCO-VIETNAM Co., Ltd.	Export-Import Bank of Korea	USD	65,000,000	69,641	8,125,000	8,706	
	PT. KRAKATAU POSCO	Export-Import Bank of Korea and others	USD	196,000,000	209,994	196,000,000	209,994	
	Zhangjiagang Pohang Stainless Steel Co., Ltd.	BTMJ and others	USD	1,350,300,000	1,446,711	1,187,394,785	1,272,174	
	POSCO DAEWOO Corporation	Daewoo Global Development. Pte., Ltd	Export-Import Bank of Korea	CNY	760,500,000	124,456	684,450,000	112,011
		Daewoo Power PNG Ltd.	MIRAE ASSET DAEWOO CO.,LTD.	KRW	21,633,300	23,178	21,633,300	23,178
		Daewoo Textile LLC	Export-Import Bank of Korea	KRW	29,137	29,137	10,703	10,703
POSCO ASSAN TST STEEL INDUSTRY		Export-Import Bank of Korea	USD	54,400,000	58,284	54,400,000	58,284	
POSCO DAEWOO INDIA PVT., LTD.		ING and others	USD	4,000,000	4,286	4,000,000	4,286	
PT. Bio Inti Agrindo		Shinhan Bank and others	USD	14,652,750	15,699	14,652,750	15,699	
Songdo Posco family Housing		SC Bank and others	USD	162,400,000	173,995	51,237,684	54,896	
		Export-Import Bank of Korea and others	INR	7,350,000,000	122,892	2,037,278,075	34,063	
		SAMSUNG SECURITIES CO.,LTD and others	USD	120,875,000	129,505	120,875,000	129,505	
			KRW	70,000	70,000	49,500	49,500	
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	POSCO E&C Vietnam Co., Ltd.	Export-Import Bank of Korea	USD	30,000,000	32,142	30,000,000	32,142	
	HONG KONG POSCO E&C (CHINA) INVESTMENT Co., Ltd.	Woori Bank and others	USD	138,000,000	147,853	138,000,000	147,853	
	POSCO ENGINEERING & CONSTRUCTION DO BRAZIL LTDA.	HSBC	USD	100,000,000	107,140	100,000,000	107,140	
	POSCO ENGINEERING (THAILAND) CO., LTD.	POSCO Asia Co., Ltd	USD	39,451,000	42,268	39,451,000	42,268	
	POSCO Engineering and Construction India Private Limited	Woori Bank	USD	2,100,000	2,250	2,100,000	2,250	
	PT PEN INDONESIA	POSCO Asia Co., Ltd.	USD	5,000,000	5,357	5,000,000	5,357	
	PT. POSCO E&C INDONESIA	BNP Indonesia	IDR	79,000,000,000	6,241	79,000,000,000	6,241	
	Songdo Posco family Housing	SAMSUNG SECURITIES CO.,LTD and others	KRW	70,000	70,000	49,500	49,500	
		POSCO Asia Co., Ltd. and others	USD	68,719,200	73,626	59,088,100	63,307	
		POSCO Asia Co., Ltd.	USD	1,500,000	1,607	1,500,000	1,607	
POSCO ICT	PT.POSCO ICT INDONESIA	POSCO Asia Co., Ltd.	USD	1,500,000	1,607	1,500,000	1,607	
POSCO CHEMTECH	PT.Krakatau Posco Chemtech Calcination	Hana Bank	USD	33,600,000	35,999	20,705,882	22,184	
POSCO COATED & COLOR STEEL Co., Ltd.	Myanmar POSCO C&C Company, Limited.	POSCO Asia Co., Ltd. and others	USD	13,986,947	14,985	13,986,947	14,985	
POSCO ENERGY CO., LTD.	PT. KRAKATAU POSCO ENERGY	Export-Import Bank of Korea and others	USD	193,900,000	207,744	137,396,174	147,206	
POSCO Asia Co., Ltd	POSCO ASSAN TST STEEL INDUSTRY	SMBC	USD	25,000,000	26,785	25,000,000	26,785	
[Associates and joint ventures]								
POSCO	CSP - Companhia Siderurgica do Pecem	Export-Import Bank of Korea and others	USD	420,000,000	449,990	420,000,000	449,990	
	LLP POSUK Titanium	BNDES	BRL	464,060,000	150,100	464,060,000	150,100	
POSCO DAEWOO Corporation	Nickel Mining Company SAS	SMBC	USD	15,000,000	16,071	15,000,000	16,071	
	GLOBAL KOMSCO Daewoo LLC	SMBC	EUR	46,000,000	58,846	37,000,000	47,332	
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	Industrial & Commercial Bank of China		USD	8,225,000	8,812	8,225,000	8,812	
	New Songdo International City Development, LLC	Others	KRW	340,000	340,000	317,900	317,900	
POSCO ICT	UITrans LRT Co., Ltd.	Kookmin Bank and others	KRW	20,740	20,740	20,740	20,740	
	Chun-cheon Energy Co., Ltd	Kookmin Bank and others	KRW	11,600	11,600	10,993	10,993	
POSCO CHEMTECH	Incheon-Gimpo Expressway co., Ltd.	Korea Development Bank	KRW	100,000	100,000	100,000	100,000	
	UITrans LRT Co., Ltd.	Kookmin Bank	KRW	76,000	76,000	76,000	76,000	
POSCO(Suzhou) Automotive Processing Center Co.,Ltd.	KRAKATAU POS-CHEM	Hana Bank	USD	1,140,000	1,221	1,140,000	1,221	
	DONG-SUH CHEMICAL							
POSCO DAEWOO Corporation	POS-InfraAuto (Suzhou) Co., Ltd	Korea Development Bank	USD	780,000	836	780,000	836	
	Ambatovy Project Investments Limited and others	Export-Import Bank of Korea	USD	87,272,727	93,504	28,325,258	30,348	
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	Ecocity CO.,LTD and others	Others	KRW	960,011	960,011	446,098	446,098	
	AN KHANH NEW CITY DEVELOPMENT J.V CO., LTD.							
POSCO ICT	SMS Energy and others	POSCO Asia Co., Ltd. and others	USD	150,000,000	160,710	150,000,000	160,710	
	Hyochun CO., LTD	Hana Bank and others	KRW	104,880	104,880	73,676	73,676	
POSCO AUSTRALIA PTY LTD	BLT Enterprise and others	Daegu Bank and others	KRW	39,575	39,575	39,575	39,575	
	Department of Trade and Investment (NSW Government)	Kyobo Life Insurance Co.,Ltd and others	KRW	1,163,585	1,163,585	1,163,585	1,163,585	
	Woori Bank and others		AUD	25,260,721	21,097	25,260,721	21,097	
			USD	4,683,667,474	5,018,081	3,834,409,355	4,108,186	
			KRW	2,985,528	2,985,528	2,358,270	2,358,270	
			CNY	760,500,000	124,456	684,450,000	112,011	
			INR	7,350,000,000	122,892	2,037,278,075	34,063	
			IDR	79,000,000,000	6,241	79,000,000,000	6,241	
			THB	5,501,000,000	180,268	5,501,000,000	180,268	
			EUR	46,000,000	58,846	37,000,000	47,332	
			AUD	25,260,721	21,097	25,260,721	21,097	
			BRL	464,060,000	150,100	464,060,000	150,100	

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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(c) POSCO ENGINEERING & CONSTRUCTION CO., LTD. has provided the completion guarantees for Samsung C&T Corporation amounting to ₩395,792 million while Samsung C&T Corporation has provided the construction guarantees or payment guarantees on customers' borrowings on behalf of POSCO ENGINEERING & CONSTRUCTION CO., LTD. amounting to ₩269,455 million as of December 31, 2017.

(d) Other commitments

Details of other commitments of the Company as of December 31, 2017 are as follows:

POSCO POSCO entered into long-term contracts to purchase iron ore, coal, nickel and others. The contracts of iron ore and coal generally have terms of more than three years and the contracts of nickel have terms of more than one year. These contracts provide for periodic price adjustments based on the market price. As of December 31, 2017, 116 million tons of iron ore and 18 million tons of coal remained to be purchased under such long-term contracts.

POSCO entered into an agreement with Tangguh Liquefied Natural Gas (LNG) Consortium in Indonesia to purchase 550 thousand tons of LNG annually for 20 years commencing in August 2005. The purchase price is subject to change, based on changes of the monthly standard oil price (JCC) and with a price ceiling.

As of December 31, 2017, the Company entered into commitments with KOREA ENERGY AGENCY for long-term foreign currency borrowings, which enables the Company to borrow up to the amount of USD 6.49 million. The borrowings are related to the Company's the exploration of gas hydrates in Western Fergana-Chinabad. The repayment of the borrowings depends on the success of the projects. The Company is not liable for the repayment of full or part of the amount borrowed if the respective projects fail. The Company has agreed to pay a certain portion of its profits under certain conditions, as defined by the borrowing agreements. As of December 31, 2017, the ending balance of the borrowing amounts to USD 1.02 million.

POSCO has provided a supplemental funding agreement, as the largest shareholder, as requested from the creditors, including Norddeutsche Landesbank, for seamless funding to POSCO ENERGY Co., Ltd. under construction of new power plant.

The Company provides a supplementary fund of up to ₩9.8 billion to the Company's subsidiary, Busan E&E Co., Ltd., at the request of creditors such as the Korea Development Bank.

The Company provides supplementary funding for the purpose of promoting the Suncheon Bay PRT business of Suncheon Eco Trans Co., Ltd, a subsidiary of the Company, at the request of creditors.

POSCO ENGINEERING & CONSTRUCTION CO., LTD. As of December 31, 2017, POSCO ENGINEERING & CONSTRUCTION CO., LTD. has foreign currency guarantee of up to USD 2,311 million and uses USD 1,306 million with Woori Bank and others.

POSCO ICT As of December 31, 2017, in relation to contract enforcement, POSCO ICT was provided with ₩143,582 million and ₩22,432 million guaranties from Korea Software Financial Cooperative and Seoul Guarantee Insurance, respectively.

POSCO and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2017

(e) Litigation in progress

As of December 31, 2017, litigations in progress that POSCO and certain subsidiaries are defendants in legal actions arising from the normal course of business are as follows:

(in millions of Won, in thousands of foreign currencies)

Company	Legal actions	Claim amount	Won equivalent	Description
POSCO	15	KRW 23,037	23,037	Lawsuit on claim for employee right and others(*1)
	1	USD 1,583	1,696	Arbitration on trading and others
POSCO DAEWOO Corporation	2	EUR 2,747	3,514	Lawsuit on claim for damages and others
	3	INR 4,518,694	75,553	Lawsuit on claim for payment on guarantees and others(*1)
	10	KRW 9,903	9,903	Lawsuit on claim for payment and others
	3	USD 22,228	23,815	Lawsuit on claim for damages and others(*1)
	1	PKR 124,775	1,208	Lawsuit on claim for damages
	1	CAD 79,000	67,363	Lawsuit on claim for damages
POSCO ENGINEERING & CONSTRUCTION., LTD.	104	KRW 461,134	461,134	Arbitration on construction costs allocation and others
POSCO ICT	13	KRW 9,894	9,894	Lawsuit on claim for payment and others
POSCO A&C	3	KRW 3,985	3,985	Lawsuit on claim for payment on construction
POSCO ENERGY CO., LTD.	4	KRW 7,017	7,017	Lawsuit on claim for damages and revocation of electricity supply contract and others
POSCO E&C CHINA CO., LTD.	11	CNY 13,679	2,239	Lawsuit on claim for payment of reserve for construction warranty and others
	1	KRW 3,305	3,305	Lawsuit on claim for payment on construction
POSPower CO., Ltd.	1	KRW 1,000	1,000	Lawsuit on claim for damages
Posco e&c Songdo International Building	3	KRW 892	892	Lawsuit on affirmation of the non-existence of general meeting of stockholders and others
POSCO ENGINEERING (THAILAND) CO., LTD.	7	THB 724,400	23,739	Lawsuit on claim for payment on construction
POSCO TNPC Otomotiv Celik San. Ve Tic. A.S	6	TRY 31	9	Lawsuit on claim for unfair dismissal and others
PT. KRAKATAU POSCO	1	IDR 324,858,033	25,664	Lawsuit on claim for payment on construction
POSCO(Dalian) IT Center Development Co., Ltd.	2	CNY 423	69	Lawsuit over contract dispute dealing apartment
Brazil Sao Paulo Steel Processing Center	3	BRL 12,167	3,935	Lawsuit on claim for payment on construction and others
POSCO ENGINEERING & CONSTRUCTION DO BRAZIL LTDA.	184	BRL 121,058	39,156	Lawsuit on claim for damages and others(*1)
HONG KONG POSCO E&C (CHINA) INVESTMENT Co., Ltd.	1	KRW 3,305	3,305	Lawsuit on claim for payment on construction
POSCO India Chennai Steel Processing Centre Pvt.Ltd.	6	USD 8,409	9,009	Lawsuit on custom duty and others

(*1) The Company made a reliable estimate in 163 lawsuits by considering the possibility and amount of outflow of resources and recognized ₩27,963 million as provision for legal contingencies and claims.

For all the other lawsuits and claims, management does not believe the Company has any present obligations and therefore, the Company has not recognized any provisions as of December 31, 2017 for the matters.

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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(f) Other contingencies

POSCO	POSCO has provided three blank promissory notes and three blank checks to KOREA ENERGY AGENCY as collateral for long-term foreign currency borrowings.
POSCO DAEWOO Corporation	As of December 31, 2017, POSCO DAEWOO Corporation has provided 33 blank promissory notes and 21 blank checks to KOREA ENERGY AGENCY and others as collateral for the guarantee on performance for contracts and others.
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	As of December 31, 2017, POSCO ENGINEERING & CONSTRUCTION CO., LTD. has provided four blank promissory notes and 35 blank checks as collateral for agreements and outstanding loans. As of December 31, 2017, the Company stands joint surety amounting to ₩8,988,279 million for the partners' guarantee issued from Korea Housing & Urban Guarantee Corporation.
POSCO ICT	As of December 31, 2017, POSCO ICT has provided two blank promissory notes and four blank checks to financial institutions as collateral for the guarantee on performance for contracts and others.

39. Statements of Cash Flows

(a) Changes in operating assets and liabilities for the years ended December 31, 2017 and 2016 were as follows:

<i>(in millions of Won)</i>	2017	2016
Trade accounts and notes receivable	₩ 49,991	181,189
Other receivables	113,740	191,591
Inventories	(1,056,518)	(767,501)
Other current assets	110,688	(287,377)
Other non-current assets	12,455	33,584
Trade accounts and notes payable	(607,999)	769,337
Other payables	(26,922)	(179,174)
Other current liabilities	(177,137)	196,178
Provisions	(145,763)	(124,884)
Payments of severance benefits	(185,220)	(278,278)
Plan assets	3,815	(138,854)
Other non-current liabilities	(17,404)	(21,626)
	₩ <u>(1,926,274)</u>	<u>(425,815)</u>

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2017

(b) Changes in liabilities arising from financial activities for the year ended December 31, 2017 were as follows:

(in millions of Won)

		Liabilities				Derivatives that hedge borrowings
		Short-term borrowings	long-term borrowings	Dividend payable	Finance lease liabilities	
Beginning	₩	7,979,727	14,725,271	7,770	114,409	(52,373)
Changes from financing cash flows		558,083	(1,410,033)	(931,232)	(10,536)	-
Changes arising from obtaining or losing control of subsidiaries or other business		(12,469)	3,299	-	-	-
The effect of changes in foreign exchange rates		(350,523)	(435,170)	-	(10,855)	-
Changes in fair values		-	-	-	-	171,693
Other changes:						
Decrease in retained earnings		-	-	863,579	-	-
Decrease in non-controlling interests		-	-	67,096	-	-
Amortization of discount on debentures issued		-	5,472	-	-	-
Ending	₩	8,174,818	12,888,839	7,213	93,018	119,320

40. Operating Segments

(a) The Company's operating businesses are organized based on the nature of markets and customers. The Company has four reportable operating segments - steel, construction, trading and others. The steel segment includes production of steel products and revenue of such products. The construction segment includes planning, designing and construction of industrial plants, civil engineering projects and commercial and residential buildings, both in Korea and overseas. The trading segment consists of exporting and importing a wide range of steel products and raw materials that are both obtained from and supplied to POSCO, as well as between other suppliers and purchasers in Korea and overseas. Other segments include power generation, liquefied natural gas production, network and system integration and logistics. The policies of classification and measurement on operating segments were the same as those that applied to the consolidated financial statements as of and for the year ended December 31, 2016.

(b) Information about reportable segments as of and for the years ended December 31, 2017 and 2016 was as follows:

1) As of and for the year ended December 31, 2017

(in millions of Won)

		Steel	Trading	Construction	Others	Total
External revenues	₩	30,230,368	20,802,207	6,886,606	2,735,919	60,655,100
Internal revenues		17,381,010	14,075,996	398,924	2,548,674	34,404,604
Including inter segment revenue		12,004,614	8,043,643	329,215	2,446,029	22,823,501
Total revenues		47,611,378	34,878,203	7,285,530	5,284,593	95,059,704
Interest income		128,827	32,799	100,922	17,940	280,488
Interest expenses		(422,357)	(121,967)	(112,983)	(100,656)	(757,963)
Depreciation and amortization		(2,856,133)	(206,490)	(42,123)	(255,620)	(3,360,366)
Impairment loss on property, plant and equipment and others		(149,840)	(140,839)	(37,476)	(8,564)	(336,719)
Impairment loss on available-for-sale investments		(95,261)	-	(18,637)	(13,421)	(127,319)
Share of loss of equity-accounted investees, net		8,352	-	(8,555)	(1,518)	(1,721)
Income tax expense		(977,853)	(109,710)	(109,961)	(77,172)	(1,274,696)
Segment profit		2,790,855	112,661	24,545	232,700	3,160,761
Segment assets		70,017,816	14,139,098	8,609,753	8,776,090	101,542,757
Investment in subsidiaries, associates and joint ventures		16,116,654	1,134,798	668,392	1,193,895	19,113,739
Acquisition of non-current assets		2,033,184	286,185	99,190	251,665	2,670,224
Segment liabilities		19,057,249	10,386,294	5,744,693	4,620,902	39,809,138

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2) As of and for the year ended December 31, 2016

<i>(in millions of Won)</i>		Steel	Trading	Construction	Others	Total
External revenues	₩	26,844,154	16,774,078	6,768,348	2,696,933	53,083,513
Internal revenues		16,062,016	9,646,026	713,703	2,379,945	28,801,690
Including inter segment revenue		8,992,783	5,296,847	557,526	2,285,128	17,132,284
Total revenues		42,906,170	26,420,104	7,482,051	5,076,878	81,885,203
Interest income		126,210	40,424	65,256	13,564	245,454
Interest expenses		(459,345)	(70,841)	(102,292)	(126,523)	(759,001)
Depreciation and amortization		(2,788,535)	(165,863)	(57,719)	(264,299)	(3,276,416)
Impairment loss on property, plant and equipment and others		(99,165)	(45,995)	(9,426)	(88,696)	(243,282)
Impairment loss on available-for-sale investments		(225,225)	(28,988)	(35,331)	(24,902)	(314,446)
Share of loss of equity-accounted investees, net		(211,084)	(53,586)	(283,833)	(6,369)	(554,872)
Income tax expense		(495,874)	(18,629)	107,520	(56,026)	(463,009)
Segment profit (loss)		1,511,383	53,244	(1,403,712)	(25,889)	135,026
Segment assets		69,914,939	13,580,179	9,501,046	8,529,600	101,525,764
Investment in subsidiaries, associates and joint ventures		16,109,360	1,100,973	795,445	1,200,295	19,206,073
Acquisition of non-current assets		2,334,842	249,597	25,533	191,715	2,801,687
Segment liabilities		20,292,764	10,134,170	6,780,380	4,709,689	41,917,003

(c) Reconciliations of total segment revenues, profit or loss, assets and liabilities, and other significant items to their respective consolidated financial statement line items are as follows:

1) Revenues

<i>(in millions of Won)</i>		2017	2016
Total revenue for reportable segments	₩	95,059,704	81,885,203
Elimination of inter-segment revenue		(34,404,604)	(28,801,690)
	₩	<u>60,655,100</u>	<u>53,083,513</u>

2) Profit

<i>(in millions of Won)</i>		2017	2016
Total profit for reportable segments	₩	3,160,761	135,026
Goodwill and corporate FV adjustments		(84,370)	(123,110)
Elimination of inter-segment profit		(102,922)	1,036,253
Income tax expense		1,206,223	384,685
Profit before income tax expense	₩	<u>4,179,692</u>	<u>1,432,854</u>

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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3) Assets

<i>(in millions of Won)</i>		2017	2016
Total assets for reportable segments(*1)	₩	101,542,757	101,525,764
Investment in subsidiaries, associates and joint ventures		(15,555,972)	(15,322,271)
Goodwill and corporate FV adjustments		3,368,333	3,750,915
Elimination of inter-segment assets		(10,330,159)	(10,191,413)
	₩	<u>79,024,959</u>	<u>79,762,995</u>

(*1) As segment assets and liabilities are determined based on separate financial statements, for subsidiaries which are in a different segment from that of its immediate parent company, their carrying amount in separate financial statements is eliminated upon consolidation. In addition, adjustments are made to adjust the amount of investment in associates and joint ventures from the amount reflected in segment assets to that determined using equity method in consolidated financial statements.

4) Liabilities

<i>(in millions of Won)</i>		2017	2016
Total liabilities for reportable segments	₩	39,809,138	41,917,003
Goodwill and corporate FV adjustments		483,693	442,178
Elimination of inter-segment liabilities		(8,731,880)	(8,434,580)
	₩	<u>31,560,951</u>	<u>33,924,601</u>

5) Other significant items

a) December 31, 2017

<i>(in millions of Won)</i>		Total segment	Goodwill and corporate FV adjustments	Elimination of inter-segment transactions	Consolidated
Interest income	₩	280,488	-	(68,037)	212,451
Interest expenses		(757,963)	1,304	103,544	(653,115)
Depreciation and amortization		(3,360,366)	(106,195)	169,141	(3,297,420)
Share of loss of equity-accounted investees, net		(1,721)	-	12,261	10,540
Income tax expense		(1,274,696)	21,270	47,203	(1,206,223)
Impairment loss on property, plant and equipment and others		(336,719)	(867)	34,619	(302,967)
Impairment loss on available-for-sale investments		(127,319)	-	4,105	(123,214)
	₩	<u>(5,578,296)</u>	<u>(84,488)</u>	<u>302,836</u>	<u>(5,359,948)</u>

POSCO and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
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b) December 31, 2016

(in millions of Won)

		Goodwill and corporate FV adjustments	Elimination of inter-segment transactions	Consolidated
	Total segment			
Interest income	₩ 245,454	-	(62,979)	182,475
Interest expenses	(759,001)	(807)	101,082	(658,726)
Depreciation and amortization	(3,276,416)	(104,949)	167,518	(3,213,847)
Share of loss of equity-accounted investees, net	(554,872)	(38,732)	504,927	(88,677)
Income tax expense	(463,009)	21,945	56,379	(384,685)
Impairment loss of property, plant and equipment and others	(243,282)	-	(125,657)	(368,939)
Impairment loss on available-for-sale investments	(314,446)	-	66,042	(248,404)
	<u>₩ (5,365,572)</u>	<u>(122,543)</u>	<u>707,312</u>	<u>(4,780,803)</u>

(d) Revenue by geographic area for the years ended December 31, 2017 and 2016 was as follows:

(in millions of Won)

	2017	2016
Domestic	₩ 38,882,220	34,883,941
Japan	2,200,405	1,892,022
China	6,731,214	5,908,046
Asia-other	7,750,553	5,649,843
North America	1,725,120	1,899,291
Others	3,365,588	2,850,370
	<u>₩ 60,655,100</u>	<u>53,083,513</u>

In presenting information on the basis of geography, segment revenue is based on the geographical location of customers.

(e) Non-current assets by geographic area as of December 31, 2017 and 2016 are as follows:

(in millions of Won)

	2017	2016
Domestic	₩ 30,790,462	31,772,641
Japan	162,328	187,266
China	1,284,561	1,451,405
Asia-other	5,266,799	6,163,388
North America	277,249	168,800
Others	1,119,319	1,233,288
	<u>₩ 38,900,718</u>	<u>40,976,788</u>

Non-current assets by geographic area include investment property, property, plant and equipment, goodwill and other intangible assets.

(f) There are no customers whose revenue is 10% or more of the consolidated revenue.