POSCO

Separate Financial Statements
December 31, 2019 and 2018

(With Independent Auditors' Report Thereon)

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Independent Auditors' Report

Based on a report originally issued in Korean

The Board of Directors and Shareholders
POSCO:

Opinion

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

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

We also have audited, in accordance with Korean Standards on Auditing (KSAs), the Company's Internal Control over Financial Reporting ("ICFR") as of December 31, 2019 based on the criteria established in Conceptual Framework for Designing and Operating Internal Control over Financial Reporting issued by the Operating Committee of Internal Control over Financial Reporting in the Republic of Korea, and our report dated March 12, 2020 expressed an unmodified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

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

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the separate financial statements as of and for the year ended December 31, 2019. These matters were addressed in the context of our audit of the separate financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Assessment of impairment on investments in subsidiaries, associates and joint ventures

As described in note 3, 11 and 32 to the separate financial statements, the carrying amount of investments in subsidiaries, associates and joint ventures is ₩15,069,857 million as of December 31, 2019. The Company recognized impairment loss on investments in subsidiaries, associates and joint ventures of ₩865,769 million during the year ended December 31, 2019.

The Company identifies whether there is any indication for impairment at the end of reporting period and performs impairment test over investments in subsidiaries, associates and joint ventures when impairment indication exists. Recoverable amount is the greater of value-in-use and fair value less costs to sell. In estimating the value-in-use, management's judgment is involved in determining the key assumptions such as sales growth rate, discount rate and terminal growth rate that have a significant impact on the estimated value-in-use. Considering significant degree of judgment in estimating value-in-use and likelihood of management bias, we identified assessment of impairment on investments in subsidiaries, associates and joint ventures as a key audit matter.

The primary procedures we performed to address this key audit matter included the following:

- Assess the qualification and objectivity of the external institution engaged by the Company to assess the value-in-use of certain investments;
- Testing certain internal controls over the Company’s impairment assessment process of investments in subsidiaries, associates and joint ventures;
- Comparing the completeness of the list of impairment tests with the list of investments for which an indication of impairment exists;
- Evaluating the reasonableness of the estimated sales growth rate by comparison with the latest financial budgets approved by the board of directors, historical performance and industry reports;
- Engaging our valuation specialists to assist us in assessing the discount rate applied to impairment test of certain investments and comparing with recalculated discount rate using observable information;
- Performing sensitivity analysis on the discount rate and terminal growth rate applied to assess the impact of changes in these key assumptions on the conclusion reached in management’s impairment assessment; and,
- Comparing the future cash flows forecasts prepared in prior year with the current year’s performance to assess the Company’s ability to accurately forecast.

Other Matter

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

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

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

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

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

Auditors' Responsibilities for the Audit of the Separate Financial Statements

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

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

- Identify and assess the risks of material misstatement of the separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.
- Evaluate the appropriateness of accounting policies used in the preparation of the separate financial statements and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the separate financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the separate financial statements, including the disclosures, and whether the separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

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

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

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

The engagement partner on the audit resulting in this independent auditors' report is Se Hong Choi.

KPMG Samjong Accounting Corp.

Seoul, Korea
March 12, 2020

This report is effective as of March 12, 2020, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying separate 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
Separate Statements of Financial Position
As of December 31, 2019 and 2018

(in millions of Won)	Notes		December 31, 2019	December 31, 2018
Assets				
Cash and cash equivalents	4,5,22	₩	978,139	259,219
Trade accounts and notes receivable, net	6,22,36		3,987,041	3,968,372
Other receivables, net	7,22,36		321,352	206,432
Other short-term financial assets	8,22		7,858,979	7,025,143
Inventories	9,33		4,988,530	5,288,009
Assets held for sale	10		53,924	25,683
Other current assets	15		28,101	23,542
Total current assets			18,216,066	16,796,400
Long-term trade accounts and notes receivable, net	6,22		6,014	7,673
Other receivables, net	7,22		56,468	57,767
Other long-term financial assets	8,22		1,257,896	1,176,757
Investments in subsidiaries, associates and joint ventures	11,32		15,069,857	15,121,339
Investment property, net	12		158,077	108,215
Property, plant and equipment, net	13,32		20,132,199	20,154,334
Intangible assets, net	14		708,915	645,222
Other non-current assets	15		105,274	58,273
Total non-current assets			37,494,700	37,329,580
Total assets		₩	55,710,766	54,125,980

See accompanying notes to the condensed separate interim financial statements.

POSCO
Separate Statements of Financial Position, Continued
As of December 31, 2019 and 2018

(in millions of Won)	Notes		December 31, 2019	December 31, 2018
Liabilities				
Trade accounts and notes payable	22,36	₩	667,551	1,106,226
Short-term borrowings and current installments of long-term borrowings	4,16,22,38		1,146,476	826,862
Other payables	17,22,36,38		1,113,003	1,072,733
Other short-term financial liabilities	18,22,38		10,969	12,638
Current income tax liabilities	34		237,293	803,543
Provisions	19		21,007	19,165
Other current liabilities	21		135,147	54,806
Total current liabilities			3,331,446	3,895,973
Long-term borrowings, excluding current installments	4,16,22,38		5,191,537	3,444,108
Other payables	17,22,38		222,802	144,343
Other long-term financial liabilities	18,22,38		46,925	79,936
Defined benefit liabilities, net	20		54,146	863
Deferred tax liabilities	34		1,190,553	1,179,672
Long-term provisions	19		53,942	93,719
Other non-current liabilities	21		5,230	15,264
Total non-current liabilities			6,765,135	4,957,905
Total liabilities			10,096,581	8,853,878
Equity				
Share capital	23		482,403	482,403
Capital surplus	23		1,252,220	1,154,775
Hybrid bonds	24		199,384	199,384
Reserves	25		(183,930)	(207,191)
Treasury shares	26		(1,508,303)	(1,532,728)
Retained earnings	27		45,372,411	45,175,459
Total equity			45,614,185	45,272,102
Total liabilities and equity		₩	55,710,766	54,125,980

See accompanying notes to the condensed separate interim financial statements.

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

(in millions of Won, except per share information)	Notes		2019	2018
Revenue	28,36	₩	30,373,511	30,659,425
Cost of sales	9,20,30,33,36		(26,700,874)	(25,728,293)
Gross profit			3,672,637	4,931,132
Selling and administrative expenses				
Reversal of (impairment loss) on				
trade accounts and notes receivable	22,33		4,535	(6,586)
Other administrative expenses	20,29,30,33		(851,140)	(881,163)
Selling expenses	29,33		(239,673)	(234,007)
Operating profit			2,586,359	3,809,376
Finance income and costs				
Finance income	22,31		868,682	629,940
Finance costs	22,31		(508,242)	(458,326)
Other non-operating income and expenses				
Reversal of (impairment loss) on other receivables	22,33		(286)	2,925
Other non-operating income	32		238,210	306,543
Other non-operating expenses	32,33		(1,353,474)	(2,055,559)
Profit before income tax			1,831,249	2,234,899
Income tax expense	34		(655,537)	(1,162,307)
Profit			1,175,712	1,072,592
Other comprehensive income (loss)				
Items that will not be reclassified				
subsequently to profit or loss:				
Remeasurements of defined benefit plans	20		(80,554)	(106,057)
Net changes in fair value of equity investments				
at fair value through other comprehensive income	8,22,25		14,955	(131,646)
Total comprehensive income		₩	1,110,113	834,889
Basic and diluted earnings per share (in Won)	35	₩	14,592	13,186

See accompanying notes to the condensed separate interim financial statements.

POSCO
Separate Statements of Changes in Equity
For the years ended December 31, 2019 and 2018

(in millions of Won)		Share capital	Capital surplus	Hybrid bonds	Reserves	Treasury shares	Retained earnings	Total
Balance as of January 1, 2018	₩	482,403	1,156,429	996,919	233,390	(1,533,054)	44,605,368	45,941,455
Adjustment on initial application of K-IFRS No. 1115, net of tax		-	-	-	-	-	(883)	(883)
Adjustment on initial application of K-IFRS No. 1109, net of tax		-	-	-	(321,654)	-	321,603	(51)
Adjusted balance as of January 1, 2018		482,403	1,156,429	996,919	(88,264)	(1,533,054)	44,926,088	45,940,521
Comprehensive income:								
Profit		-	-	-	-	-	1,072,592	1,072,592
Other comprehensive income (loss)								
Remeasurements of defined benefit plans, net of tax		-	-	-	-	-	(106,057)	(106,057)
Net changes in fair value of equity investments at fair value through other comprehensive income, net of tax		-	-	-	(118,927)	-	(12,719)	(131,646)
Transactions with owners of the Company, recognized directly in equity:								
Year-end dividends		-	-	-	-	-	(279,999)	(279,999)
Interim dividends		-	-	-	-	-	(400,003)	(400,003)
Repayment of hybrid bonds		-	(1,787)	(797,535)	-	-	-	(799,322)
Interest of hybrid bonds		-	-	-	-	-	(24,443)	(24,443)
Disposal of treasury shares		-	133	-	-	326	-	459
Balance as of December 31, 2018	₩	482,403	1,154,775	199,384	(207,191)	(1,532,728)	45,175,459	45,272,102
Balance as of January 1, 2019	₩	482,403	1,154,775	199,384	(207,191)	(1,532,728)	45,175,459	45,272,102
Comprehensive income:								
Profit		-	-	-	-	-	1,175,712	1,175,712
Other comprehensive income (loss)								
Remeasurements of defined benefit plans, net of tax		-	-	-	-	-	(80,555)	(80,555)
Net changes in fair value of equity investments at fair value through other comprehensive income, net of tax		-	-	-	23,261	-	(8,306)	14,955
Transactions with owners of the Company, recognized directly in equity:								
Year-end dividends		-	-	-	-	-	(400,006)	(400,006)
Interim dividends		-	-	-	-	-	(480,694)	(480,694)
Interest of hybrid bonds		-	-	-	-	-	(9,200)	(9,200)
Disposal of treasury shares		-	12,576	-	-	24,425	-	37,001
Business combination(Note 39)		-	84,869	-	-	-	-	84,869
Balance as of December 31, 2019	₩	482,403	1,252,220	199,384	(183,930)	(1,508,303)	45,372,411	45,614,185

See accompanying notes to the condensed separate interim financial statements.

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

(in millions of Won)	**Notes**		**2019**	**2018**
Cash flows from operating activities				
Profit		₩	1,175,712	1,072,592
Adjustments for :				
Expenses related to post-employment benefit			119,177	111,034
Depreciation			2,160,124	2,111,870
Amortization			77,190	69,101
Reversal of impairment loss on trade and other receivable			(4,248)	3,661
Finance income			(598,303)	(443,952)
Finance costs			284,334	235,892
Loss on valuation of inventories			7,677	12,169
Gain on disposal of property, plant and equipment			(25,583)	(47,941)
Loss on disposal of property, plant and equipment			114,874	120,570
Impairment losses on property, plant and equipment			222,036	940,595
Gain on disposal of intangible assets			(1,013)	(99,378)
Impairment losses on investments in subsidiaries, associates and joint ventures			865,769	787,999
Recovery of Impairment losses on investments in subsidiaries, associates and joint venture			-	(56,420)
Gain on disposal of assets held for sale			(30,262)	(13)
Impairment loss on assets held for sale			8,021	7,788
Gain on disposal of emissions right			(6,122)	-
Gain on valuation of emissions rights			(25,440)	-
Increase to provisions			(10,398)	53,477
Income tax expense			655,536	1,162,307
Others			324	2,361
Changes in operating assets and liabilities	38		(438,041)	(813,429)
Interest received			147,683	154,529
Interest paid			(160,950)	(148,129)
Dividends received			284,648	228,296
Income taxes paid			(1,221,790)	(689,008)
Net cash provided by operating activities		₩	3,600,955	4,775,971

See accompanying notes to the condensed separate interim financial statements.

POSCO
Separate Statements of Cash Flows, Continued
For the years ended December 31, 2019 and 2018

(in millions of Won)	Notes		2019	2018
Cash flows from investing activities				
Decrease in deposits		₩	2,747,009	2,821,831
Collect of short-term loans			62	-
Proceeds from disposal of debt securities			-	130,000
Proceeds from disposal of short-term financial instruments			32,210,156	27,992,468
Proceeds from disposal of debt securities			54	855
Proceeds from disposal of equity securities			24,890	45,445
Proceeds from disposal of other securities			4,522	2,658
Proceeds from disposal of stock warrants			-	130
Proceeds from disposal of investments in subsidiaries, associates and joint ventures			14,278	101,294
Proceeds from disposal of property, plant and equipment			-	4,551
Proceeds from disposal of intangible assets			5,587	26,954
Proceeds from disposal of assets held for sale			523,128	231
Proceeds from disposal of emissions rights			12,693	-
Proceeds from business combination			2,171	-
Increase in deposits			(2,792,821)	(3,404,466)
Acquisition of short-term financial investments			(32,670,040)	(28,613,172)
Increase in short-term loans			-	(2,950)
Increase in long-term loans			(5,697)	(261)
Acquisition of debt securities			(290,102)	(130,238)
Acquisition of equity securities			(11,144)	(1,443)
Acquisition of other securities			(1,710)	(464)
Acquisition of investment in subsidiaries, associates and joint ventures			(491,175)	(855,602)
Acquisition of property, plant and equipment			(1,903,966)	(1,677,962)
Proceeds from disposal of property, plant and equipment			(41,003)	-
Acquisition of intangible assets			(132,661)	(58,808)
Payment for acquisition of business, net of cash acquired			(1,156,953)	-
Net cash used in investing activities		₩	(3,952,722)	(3,618,949)
Cash flows from financing activities	38			
Proceeds from borrowings			2,950,068	1,743,353
Increase in long-term financial liabilities			3,287	1,162
Receipt of government grants			3,273	86
Proceeds from disposals of derivatives			9,682	-
Repayment of borrowings			(959,404)	(1,452,359)
Repayment of Lease liabilities			(39,194)	(11,048)
Decrease in long-term financial liabilities			(1,587)	(5,051)
Payment of cash dividends			(881,169)	(679,998)
Payment of interest of hybrid bonds			(9,200)	(26,353)
Repayment of hybrid bonds			-	(800,000)
Net cash used in financing activities		₩	1,075,756	(1,230,208)
Effect of exchange rate fluctuation on cash held			(5,069)	-
Net increase(decrease) in cash and cash equivalents			718,920	(73,186)
Cash and cash equivalents at beginning of the period	5		259,219	332,405
Cash and cash equivalents at end of the period	5	₩	978,139	259,219

See accompanying notes to the condensed separate interim financial statements.

1. Reporting Entity

POSCO (the "Company") is the largest steel producer in Korea which 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 the Company have been listed on the Korea Exchange since June 10, 1988. The Company 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, 2019, major shareholders are as follows:

Shareholder's name	Number of shares	Ownership (%)
National Pension Service	10,291,670	11.80
BlackRock Fund Advisors(*1)(*2)(*3)	5,429,071	6.23
Nippon Steel Corporation(*1)	2,894,712	3.32
Samsung Group Inc. and subsidiaries(*2)	2,401,789	2.75
GIC Private Limited	1,777,316	2.04
Others	64,392,277	73.86
	87,186,835	100.00

(*1) Includes American Depository 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 and others.
(*3) The number of shares held by the shareholder in accordance with the status report of large-scale share and others on April 30, 2019.

As of December 31, 2019, the shares of the Company are listed on the Korea Exchange, while its ADRs are listed on the New York Stock Exchanges.

2. Statement of Compliance

Statement of compliance

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

These financial statements are separate financial statements prepared in accordance with K-IFRS No. 1027 "Separate Financial Statements" presented by a parent, an investor with joint control of, or significant influence over, an investee, in which the investments are accounted for at cost.

The separate financial statements were authorized for issue by the Board of Directors on January 31, 2020, and will be submitted for approval at the shareholders' meeting to be held on March 27, 2020.

In 2019, the Company adopted K-IFRS No. 1116 "Leases" for the first time. Changes to significant accounting policies are described in Note 2 "Changes in Accounting Policies".

Basis of measurement

The separate 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 measured at fair value
(b) Financial instruments measured at fair value through profit or loss
(c) Financial instruments measured at fair value through other comprehensive income
(d) Defined benefit liabilities measured at the present value of the defined benefit obligation less the fair value of the plan assets

Functional and presentation currency

These separate financial statements are presented in Korean Won, which is the Company's functional currency which is the currency of the primary economic environment in which the Company operates.

Use of estimates and judgments

The preparation of the separate 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 separate financial statements is included in the following notes:

- Note 11 - Investments in subsidiaries, associates and joint ventures
- Note 24 - Hybrid bonds

(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 9 - Inventories
- Note 11 - Investments in subsidiaries, associates and joint ventures
- Note 13 - Property, Plant and Equipment
- Note 19 - Provisions
- Note 20 - Employee benefits
- Note 22 - Financial Instruments
- Note 34 - Income taxes
- Note 37 - 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.

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

- Note 22 – Financial instruments

Changes in Accounting Policies

The Company has initially adopted K-IFRS No. 1116 "Leases" from January 1, 2019. The other accounting standards adopted from January 1, 2019 had no significant effect on the Company's separate financial statements.

K-IFRS No. 1116 "Leases" introduced a single accounting model for lessees. As a result, the Company, as a lessee, recognized right-of-use assets representing its rights to use the underlying assets and lease liabilities representing its obligation to make lease payments. Lessor accounting remains similar to previous accounting policies.

The Company applied K-IFRS No. 1116 "Leases" using the modified retrospective approach by recognizing the cumulative effect of initial application as of January 1, 2019, the date of initial application. Accordingly, the comparative information presented for 2018 has not been restated.

(a) Definition of a lease

Previously, the Company determined at contract inception whether an arrangement was or contained a lease under K-IFRS No. 2104 "Determining Whether an Arrangement Contains a Lease". The Company now assesses whether a contract is or Contains a lease based on the new definition of a lease. Under K-IFRS No. 1116 "Leases", a contract is, or contains, a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration.

On transition to K-IFRS No. 1116 "Leases", the Company elected to apply the practical expedient to grandfather the assessment of which transactions are leases. The Company applied K-IFRS No. 1116 only to contracts that were previously identified as leases. Contracts that were not identified as leases under K-IFRS No. 1017 "Leases" and K-IFRS No. 2104 "Determining Whether an Arrangement Contains a Lease" were not reassessed. Therefore, the definition of a lease under K-IFRS No. 1116 has been applied only to contracts entered into or changed on or after January 1, 2019.

At inception or reassessment of a contract that contains a lease component, the Company allocates the consideration in the contract to each lease and non-lease component on the basis of their relative stand-alone prices.

(b) As a lessee

The Company leases many assets, including warehouses, handling equipment and IT equipment. As a lessee, the Company previously classified leases as operating or finance leases based on its assessment of whether the lease transferred substantially all of the risks and rewards of ownership. Under K-IFRS No. 1116 "Leases", the Company recognizes right-of-use assets and lease liabilities for most leases. That is, most leases are presented in the statement of financial position.

However, the Company has elected not to recognize right-of-use assets and lease liabilities for some leases of low-value assets (e.g. desktops, IT supplies, etc.). The Company recognizes lease payments associated with these leases as an expense on a straight-line basis over the lease term.

The Company measured lease liabilities and right-of-use assets related to leases as operating leases under K-IFRS No. 1017 "Leases" previously, on transition. Lease liabilities are measured at the present value of the remaining lease payments, discounted at the Company's incremental borrowing rate as of January 1, 2019 and right-of-use assets are measured at the lease liabilities adjusted by the amount of any prepaid or accrued lease payments.

The Company used a number of practical expedients when applying K-IFRS No. 1116, to leases previously classified as operating leases under K-IFRS No. 1017. In particular, the Company:

- did not recognize right-of-use assets and liabilities for leases for which the lease term ends within 12 months the date of initial application;
- excluded initial direct costs from the measurement of the right-of-use asset at the date of initial application; and
- used hindsight when determining the lease term

For finance leases under K-IFRS No. 1017, the carrying amounts of the right-of-use assets and the lease liabilities as of January 1, 2019 were determined at the carrying amounts of the finance lease assets and lease liabilities under K-IFRS No. 1017 immediately before that date.

(c) As a lessor

The Company leases out its investment properties. The Company classified these leases as operating leases, and the accounting policies applicable to the Company as a lessor are not different from those under K-IFRS No. 1017 "Leases".

In addition, the Company did not make any adjustments to leases for which the Company is a lessor as of January 1, 2019, the date of initial application.

(d) Impact on financial statements

The Company recognized additional right-of-use assets and lease liabilities as of January 1, 2019, the date of initial application. The effect on the separate financial statements as of January 1, 2019, the date of initial application is as follows:

(in millions of Won)		**The date of initial application (January 1, 2019)**
Separate statement of financial position		
Right-of-use assets presented as property, plant and equipment	₩	128,610
Lease liabilities		128,610

When measuring lease liabilities for leases that were classified as operating leases, the Company discounted lease payments using its incremental borrowing rates as of January 1, 2019, the date of initial application, and the weighted-average rates applied are 2.1 ~ 2.7%. The carrying amount of lease liabilities as of January 1, 2019, the date of initial application, is as follow:

(in millions of Won)		**The date of initial application (January 1, 2019)**
Operating lease commitments as of December 31, 2018	₩	157,098
Operating lease commitments not recognized as lease liabilities		
- Leases of low-value assets		(16,028)
- Leases with less than 12 months of lease term at transition		(975)
Operating lease commitments recognized as lease liabilities		140,095
Amount discounted using the incremental borrowing rate as of January 1, 2019, the date of initial application		128,610
Finance lease liabilities recognized as of December 31, 2018		141,762
Lease liabilities as of January 1, 2019, the date of initial application	₩	270,372

3. Summary of Significant Accounting Policies

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

Investments in subsidiaries, associates and joint ventures

These separate financial statements are prepared and presented in accordance with K-IFRS No. 1027 "Separate Financial Statements". The Company applied the cost method to investments in subsidiaries, associates and joint ventures in accordance with K-IFRS No. 1027. Dividends from a subsidiary, associate or joint venture are recognized in profit or loss when the right to receive the dividend is established.

Foreign currency transactions and translation

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 is 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.

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

Trade receivables and debt securities issued are initially recognized when they are originated. All other financial assets are initially recognized when the Company becomes a party to the contractual provisions of the instrument.

A financial asset(unless it is a trade receivable without a significant financing component) is initially measured at fair value plus, for an item not at financial assets measured at fair value through profit or loss, transaction costs that are directly attributable to its acquisition or issue. A trade receivable without a significant financing component is initially measured at the transaction price.

On initial recognition, a financial asset is classified as measured at amortized cost, debt instruments measured at fair value through other comprehensive income, equity instruments measured at fair value through other comprehensive income, or financial assets measured at fair value through profit or loss.

Financial assets are not reclassified subsequent to their initial recognition unless the Company changes its business model for managing financial assets, in which case all affected financial assets are reclassified on the first day of the reporting period following the change in the business model.

(a) Financial assets measured at amortized cost

A financial asset is measured at amortized cost if it meets both of the following conditions and is not designated as at fair value through profit or loss.
- it is held within a business model whose objective is to hold assets to collect contractual cash flows
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

Financial assets measured at amortized cost are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, gains and losses on foreign currency translation and impairment losses are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.

(b) Debt instruments measured at fair value through other comprehensive income

A debt instrument is measured at fair value through other comprehensive income if it meets both of the following conditions and is not designated as at fair value through profit or loss.

- it is held within a business model whose objective is achieved by both collection contractual cash flows and selling financial assets and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

Debt instruments measured at fair value through other comprehensive income are subsequently measured at fair value. Interest income which is calculated using the effective interest method, gains and losses from foreign currency translation and impairment losses are recognized in profit or loss and other net profit or losses are recognized in other comprehensive income. At the time of elimination, other accumulated comprehensive income is reclassified to profit or loss.

(c) Equity instruments measured at fair value through other comprehensive income

On initial recognition of an equity investment that is not held for trading, the Company may irrevocably elect to present subsequent changes in the investment's fair value in other comprehensive income. This election is made on an investment-by-investment basis.

Equity instruments measured at fair value through other comprehensive income are subsequently measured at fair value. Dividends are recognized as income in profit or loss unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognized in other comprehensive income and never reclassified to profit or loss.

(d) Financial assets measured at fair value through profit or loss

All financial assets not classified as measured at amortized cost of fair value through other comprehensive income as described above are measured at fair value through profit or loss. This includes all derivative financial assets. On initial recognition, the Company may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at fair value through other comprehensive income as at fair value through profit or loss if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

Financial assets measured at fair value through profit or loss are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognized in profit or loss.

(f) Offsetting a financial asset and a financial liability

Financial assets and financial liabilities are offset and the net amount is presented in the separate 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.

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. 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.

The estimated useful lives for the current period are as follows:

Buildings	5-40 years
Structures	5-40 years
Machinery and equipment	15 years
Vehicles	4 years
Tools	4 years
Furniture and fixtures	4 years
Lease assets	4-20 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 an having an indefinite useful life and not amortized.

Intellectual property rights	5-7 years
Development expense	4 years
Port facilities usage rights	4-75 years
Other intangible assets	4 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.

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 applied K-IFRS No. 1116 "Leases" using the modified retrospective approach by recognizing the cumulative effect of initial application as of January 1, 2019, the date of initial application. Therefore, the comparative information has not been restated and continues to be reported under K-IFRS No. 1017 "Lease" and K-IFRS No. 2104 "Determining Whether an Arrangement Contains a Lease".

1) As a lessee: policy applicable from January 1, 2019

The Company recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset of to restore the underlying asset or the site on which it is located.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Company by the end of the lease term or the cost of the right-of-use asset reflects that the Company will exercise a purchase option. In that case the right-of-use asset will be depreciated over the useful life of the underlying asset, which is determined on the same basis as that of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined the Company's incremental borrowing rate. Generally, the Company uses its incremental borrowing rate as the discount rate.

The Company determines its incremental borrowing rate by obtaining interest rates from various external sources and makes certain adjustments to reflect the terms of the lease and type of the asset leased.

Lease payments included in the measurement of the lease liability comprise the followings:

- fixed payments
- variable lease payments that depend on an index or a rate
- amounts expected to be payable under a residual value guarantee; and
- the exercise price under a purchase option that the Company's is reasonably certain to exercise, lease payments in an optional renewal period if the Company is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless the Company is reasonably certain not to terminate early.

The lease liability is measured at amortized cost using the effective interest method. When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit of loss if the carrying amount of the right-of-use asset has been reduced to zero. The lease liability is remeasured when there is:

- a revised in-substance fixed lease payment,
- a change in future lease payments arising from a change in an index or rate,
- a change in the Company's estimate of the amount expected to be payable under a residual value guarantee, or
- a change in the Company's assessment of whether it will exercise a purchase, extension or termination option

The Company presents right-of-use assets in the same line item as is presents underlying assets of the same nature that it owns, and lease liabilities are included in other payables on the consolidated statement of financial position.

The Company has elected not to recognize right-of-use assets and lease liabilities for leases of low-value assets and short-term leases, including IT equipment. The Company recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

2) As a lessee: policy applicable before January 1, 2019

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.

In the case of finance leases, 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 at the commencement of the lease term. Any initial direct costs are added to the amount recognized as an asset.

The minimum lease payment is recognized by dividing the financial cost and the repayment amount of the lease liabilities. The financial cost is allocated to the remaining balance for each reporting period so that a fixed interest rate is calculated. Contingent rents are charged as expenses in the period 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.

In the case of an operating lease, the Company recognizes the lease payment 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.

3) As a lessor

When the Company acts as a lessor, it determines at lease inception whether each lease is a finance lease or an operating lease. The classify each lease, the Company makes an overall assessment of whether the lease transfers substantially all of the risks and rewards incidental to ownership of the underlying asset. If this is the case, then the lease is a finance lease; if not, then it is an operating lease. As part of this assessment, the Company considers certain indicators such as whether the lease is for the major part of the economic life of the asset.

The Company leases out its investment properties. The Company classified these leases as operating leases, and the accounting policies applicable to the Company as a lessor are not different from those under K-IFRS No. 1017 "Leases".

Impairment for financial assets

The Company recognizes loss allowances for expected credit losses on:

- financial assets measured at amortized cost
- debt instruments measured at fair value through other comprehensive income
- lease receivables, contractual assets, loan commitments, and financial guarantee contracts

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.

(a) Judgments on credit risk

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating expected credit losses, the Company considers reasonable and supportable information that is relevant and available without undue cost or effect. This includes both quantitative and qualitative information and analysis, based on the Company's historical experience and informed credit assessment and including forward-looking information.

The Company assumes that the credit risk on a financial asset has increased significantly if it is more than 30 days past due. The Company considers a financial asset to be in default when the borrower is unlikely to pay its credit obligations to the Company in full, without recourse by the Company to actions such as realizing security (if any is held). The Company considers a debt security to have low credit risk when its credit risk rating is equivalent to the globally understood definition of 'investment grade.

(b) Measurement of expected credit losses

Lifetime expected credit losses are the expected credit losses that result from all possible default events over the expected life of a financial instrument. 12-month expected credit losses are the portion of lifetime expected credit losses that result from default that are possible within the 12 months after the reporting date. The maximum period considered when estimating expected credit losses is the maximum contractual period over which the Company is exposed to credit risk.

Expected credit losses are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls such as the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Company expects to receive.

Expected credit losses for financial assets measured at amortized cost are recognized in profit or loss. Loss allowances for financial assets measured at amortized cost are deducted from carrying amount of the assets. For debt instruments measured at fair value through other comprehensive income, the loss allowance is charged to profit or loss and is recognized in other comprehensive income.

(c) Credit-impaired financial assets

At each reporting date, the Company assesses whether financial assets measured at amortized cost and debt instrument measured at fair value through other comprehensive income are credit-impaired. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

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

- significant financial difficulty of the issuer or borrower
- a breach of contract, such as a default or delinquency in interest or principal payments
- 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
- it becoming probable that the borrower will enter bankruptcy or other financial reorganization
- the disappearance of an active market for that financial asset because of financial difficulties

(d) Write-off

The gross carrying amount of a financial asset is written off when the Company has no reasonable expectations of recovering a financial asset in entirety or a portion. The Company individually makes an assessment with respect to the timing and amount of write-off based on whether there is a reasonable expectation of recovery based on continuous payments and extinct prescriptions. The Company expects no significant recovery from the amount written off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Company's procedures for recovery of amounts due.

Impairment for non-financial assets

The carrying amounts of the Company’s non-financial assets, other than assets arising from contract assets, contract assets recognized in accordance with revenue from contracts with customers, 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. 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 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.

Any impairment identified at the CGU level is used to reduce the carrying amount of the other assets in the CGU on a pro rata basis. 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.

Derivative financial instruments

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives that is not designated as a hedging instrument are measured at fair value, and changes therein are recognized in profit or loss.

Non-derivative financial liabilities

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

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

A financial liability is classified as at fair value through profit or loss if it is classified as held-for-trading, it is a derivative or it is designated as such on 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) Financial liabilities measured at amortized cost

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

(c) Derecognition of financial liabilities

The Company derecognizes a financial liability when its contractual obligations are discharged or cancelled, or expire. The Company also derecognizes a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized at fair value. On derecognition of a financial liability, the difference between the carrying amount extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

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. The present value is determined by discounting the expected future cash flows using the interest rate of 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. 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.

(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 total of cumulative unrecognized past service cost and present value of 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.

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.

Provision for restoration related to contaminated area is recognized when the area meets the Company's policy and legal standards of contamination.

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 the Allocation and Trading of Greenhouse Gas Emission Permits 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.

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 obligation 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 as of 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.

Revenue from contracts with customers

Revenue is measured based on the consideration promised in the contract with the customer. The Company recognizes revenue when the control over a good or service is transferred to the customer. The following are the revenue recognition policies for performance obligations in the contracts with customers.

(a) Steel products

For domestic sales, the control of the product is usually transferred to the customer when the product is delivered to the customer, at which point in time revenue is recognized. Invoices are generally due within 10 to 90 days. When a customer makes payment prior to the due date, they are offered a discount at certain percentage of the invoice amount. Only when the price discount period has passed, only the amount of the cumulative revenue that has already been recognized, Income recognized including income.

For export sales, revenue is recognized at the time when control of the product is transferred to the customer based on the "International Incoterms for Interpretation of Trade Terms" prescribed in the respective contracts, and the Company's export contract generally transfers control to the customer at the shipping of the product. Invoices are usually issued at the date of bill of lading and revenues are recognized based on the terms of Letter of Credit (L / C), Acceptance Condition (D / A), Payment Condition (D / P), Telegraphic Transfer (T / T) and others.

(b) Transportation services

For the performance obligation for transportation services included in the Company's product sales contracts, revenue is recognized over the period when the services are provided and the revenue is measured by reference to the degree to which the service has been completed. The billing date and payment terms for the service charge are the same as the billing date and payment terms for sale of steel products.

Finance income and finance costs

The Company's finance income and finance costs include:

- interest income;
- interest expense;
- dividend income;
- the foreign currency gain or loss on financial assets and financial liabilities;
- the net gain or loss on financial assets measured at fair value through profit or loss;
- the net gain or loss on the disposal of investments in debt securities measured at fair value through other comprehensive income.

Interest income or expense is recognized using the effective interest method. Dividend income is recognized in profit or loss on the date on which the Company's right to receive payment is established. The 'effective interest rate' is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument to:
- the gross carrying amount of the financial asset; or
- the amortized cost of the financial liability.

In calculating interest income and expense, the effective interest rate is applied to the gross carrying amount of the asset (when the asset is not credit-impaired) or to the amortized cost of the liability. However, for financial assets that have become credit-impaired subsequent to initial recognition, interest income is calculated by applying the effective interest rate to the amortized cost of the financial asset. If the asset is no longer credit-impaired, then the calculation of interest income reverts to the gross basis.

Income tax

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

The Company recognizes interest and penalties related to corporate tax as if it is applicable to the income taxes, the Company applies K-IFRS 1012 "Income Taxes", if it is not applicable to the income taxes, the Company applies K-IFRS 1037 "Provisions Contingent Liabilities and Contingent Assets".

The Company offsets current tax assets and current tax liabilities if, and only if, the Company:
- has a legally enforceable right to set off the recognized amounts, and
- intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously.

(a) Current tax

Current tax is the expected 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 tax

The measurement of deferred 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. The Company recognizes a deferred 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 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 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.

A deferred tax asset is recognized for the carryforward of unused tax losses tax credits and deductible temporary differences to the extent that it is probable that future taxable profit will be available against which the unused tax losses, tax credits and deductible temporary differences can be utilized. The future taxable profit depends on reversing taxable temporary differences. When there are insufficient taxable temporary differences, the probability of future taxable profit (including the reversal of temporary differences) should be considered.

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

Earnings per share

Management calculates basic earnings per share ("EPS") data for the Company'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 the Company by the weighted average number of ordinary shares outstanding during the period, adjusted for own shares held.

New standards and interpretations not yet adopted

The following new standard has been published but is not mandatory for the Company for annual period beginning on January 1, 2019, and the Company has not early adopted them.

(a) K-IFRS No. 1001 "Presentation of Financial Statements" and K-IFRS No. 1008 "Accounting Policies, Changes in Accounting Estimates and Errors"

The definition of materiality has been clarified, and K-IFRS No. 1001 "Presentation of Financial Statements" and K-IFRS No. 1008 "Accounting Policies, Changes in Accounting Estimates and Errors" have been amended according to the clarified definition. In determining the materiality, information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity. The Company believes that the effect of the amendments to the consolidated financial statements is not significant.

(b) K-IFRS No. 1103 "Business Combinations"

The amendment clarifies the definition of business when it includes input and process together significantly contribute to ability to create output and requires a simplified assessment that result in an asset acquisition if substantially all of the fair value of the gross assets is concentrated in a single identifiable asset or a group of similar identifiable assets. The Company expects that the amendments will not have a material impact on its consolidated financial statements.

4. 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 separate 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.

The Company establishes an allowance for impairment that represents its estimate of expected 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.

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 overseas 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.

① Currency risk

The Company is exposed to currency risk on sales, purchases and borrowings that are denominated in a currency other than the functional currency of the Company, Korean Won. 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. The Company reduces the foreign currency exposure by repayment of foreign currency borrowings subjected to investment in overseas when its maturities come.

② Interest rate risk

The Company manages the exposure to interest rate risk by adjusting of borrowing structure ratio between borrowings at fixed interest rate 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 fluctuation of market price of listed 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.

(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, 2019 and 2018 is as follows:

(in millions of Won)		**2019**	**2018**
Total borrowings	₩	6,338,012	4,270,970
Less: Cash and cash equivalents		978,139	259,219
Net borrowings		5,359,873	4,011,751
Total equity	₩	45,614,185	45,272,102
Net borrowings-to-equity ratio		11.75%	8.86%

5. Cash and Cash Equivalents

Cash and cash equivalents as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Demand deposits and checking accounts	₩	123,971	38,574
Time deposits		443,618	84,700
Other cash equivalents		410,550	135,945
	₩	978,139	259,219

6. Trade Accounts and Notes Receivable

Trade accounts and notes receivable as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Current			
Trade accounts and notes receivable	₩	3,999,991	3,989,699
Less: Allowance for doubtful accounts		(12,950)	(21,327)
	₩	3,987,041	3,968,372
Non-current			
Trade accounts and notes receivable	₩	9,530	11,904
Less: Present value discount		(2,501)	(2,983)
Less: Allowance for doubtful accounts		(1,015)	(1,248)
	₩	6,014	7,673

Trade accounts and notes receivable sold to financial institutions, for which the derecognition conditions were not met, amounted to ₩167,021 million and ₩176,612 million as of December 31, 2019 and 2018, 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 .

7. Other Receivables

Other receivables as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Current			
Loans	₩	2,950	2,950
Other accounts receivable		279,093	186,951
Others		47,257	25,065
Less: Allowance for doubtful accounts		(7,948)	(8,534)
	₩	321,352	206,432
Non-current			
Loans	₩	34,224	26,335
Long-term other accounts receivable		27,570	36,832
Others		3,555	2,915
Less: Allowance for doubtful accounts		(8,881)	(8,315)
	₩	56,468	57,767

8. Other Financial Assets

(a) Other financial assets as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Current			
Short-term derivative assets	₩	15,603	-
Debt securities		290,559	21
Deposit instrument(*1)		1,294,525	1,248,715
Short-term financial instruments		6,258,292	5,776,407
	₩	7,858,979	7,025,143
Non-current			
Long-term derivative assets	₩	64,072	1,265
Equity securities		1,128,641	1,104,092
Debt securities		9,177	9,667
Other securities		55,972	61,701
Deposit instrument(*2)		34	32
	₩	1,257,896	1,176,757

(*1) As of December 31, 2019 and December 31, 2018, ₩4,524 million and ₩5,715 million, respectively, are restricted in relation to government assigned project.

(*2) The Company is required to provide deposits to maintain checking accounts and accordingly the withdrawal of these deposits is restricted.

(b) Equity securities and available-for-sale securities (equity instruments) as of December 31, 2019 and 2018 are as follows:

(in millions of Won)	2019							2018
	Number of shares	Ownership (%)		Acquisition cost	Fair value	Net changes in fair value of equity securities	Book value	Book value
Marketable equity securities								
Nippon Steel Corporation	15,698,500	1.65	₩	473,962	276,133	(197,829)	276,133	301,010
KB Financial group Inc.	3,863,520	0.93		178,839	184,097	5,258	184,097	179,654
Woori Financial Group Inc.	20,280,000	2.81		244,447	235,248	(9,199)	235,248	316,368
DONGKUK STEEL MILL CO., LTD	1,440,459	1.51		8,442	8,571	129	8,571	12,919
SAMWONSTEEL Co., Ltd.	5,700,000	14.25		8,930	17,214	8,284	17,214	16,188
DONGKUK INDUSTRIES COMPANY	2,611,989	4.82		11,911	6,778	(5,133)	6,778	6,387
Others (6 companies)				55,752	34,157	(21,595)	34,157	42,247
				982,283	762,198	(220,085)	762,198	874,773
Non-marketable equity securities								
Congonhas Minerios S.A.(*1)	3,658,394	2.02		221,535	292,453	70,918	292,453	182,992
Korea Nickel CO.LTD	75,600	14.00		10,194	10,194	-	10,194	-
Poongsan Special Metal Corp.	315,790	5.00		7,657	7,657	-	7,657	7,657
HANKUM.CO.LTD	21,000	4.99		4,599	4,599	-	4,599	4,599
Core-Industry Co., Ltd.	490,000	19.84		4,214	4,214	-	4,214	4,214
AJUSTEEL CO.,LTD	17,000	4.36		4,165	4,165	-	4,165	4,165
Others (28 companies)				147,690	43,161	(104,529)	43,161	25,692
				400,054	366,443	(33,611)	366,443	229,319
			₩	1,382,337	1,128,641	(253,696)	1,128,641	1,104,092

(*1) Fair value is based on an analysis performed by an external professional evaluation agency.

9. Inventories

(a) Inventories as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Finished goods	₩	868,012	1,146,961
Semi-finished goods		1,474,153	1,343,877
By-products		10,763	6,166
Raw materials		1,139,517	1,130,000
Fuel and materials		646,396	552,270
Materials-in-transit		856,706	1,120,349
Others		660	555
		4,996,207	5,300,178
Less: Allowance for inventories valuation		(7,677)	(12,169)
	₩	4,988,530	5,288,009

(b) The changes of allowance for inventories valuation for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Beginning	₩	12,169	2,363
Loss on valuation of inventories		7,677	12,169
Utilization on sale of inventories		(12,169)	(2,363)
Ending	₩	7,677	12,169

10. Assets Held for Sale

Assets held for sale as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Assets			
Investments in subsidiaries(*1)	₩	17,603	25,683
Property, plant and equipment(*2)		36,321	-
	₩	53,924	25,683

(*1) The Company determined to dispose part of the interest of POSCO Thainox Public Company Limited, subsidiary of the Company, and classified investments in subsidiaries as assets held for sale. The Company recognized ₩ 7,362 million of impairment loss from the difference between book value and net fair value of the interest, and finished disposal for part of it.

(*2) During the year ended December 31, 2019, the Company decided to sell individual assets that were suspended, such as CEM plants, and classified those assets as held for sale. The Company recognized impairment loss of ₩659 million for the difference between the carrying amount and fair value of those assets.

11. Investments in Subsidiaries, Associates and Joint ventures

(a) Investments in subsidiaries, associates and joint ventures as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Investment in subsidiaries	₩	12,243,755	12,393,106
Investment in associates		742,120	634,094
Investment in joint ventures		2,083,982	2,094,139
	₩	15,069,857	15,121,339

There are no significant restrictions on the ability of subsidiaries, associates and joint ventures to transfer funds to the controlling company, such as in the forms of cash dividends and repayment of loans or payment of advances.

(b) Details of subsidiaries and carrying amounts as of December 31, 2019 and 2018 are as follows:

(in millions of Won)

			2019					2018
	Country	Principal operations	Number of shares	Ownership (%)	Net asset value	Acquisition cost	Book value	Book value
[Domestic]								
POSCO INTERNATIONAL Corporation (Formerly, POSCO DAEWOO Corporation)(*1)	Korea	Trading	77,616,018	62.91	₩ 2,906,273	3,610,502	3,383,745	3,407,110
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	Korea	Engineering and construction	22,073,568	52.80	2,628,317	1,014,314	1,014,314	1,014,314
POSCO ENERGY CO., LTD.	Korea	Power generation	40,234,508	89.02	1,412,509	658,176	658,176	658,176
POSCO Processing&Service(*2)	Korea	Steel sales and trading	-	0.00	-	-	-	385,995
POSCO COATED & COLOR STEEL Co., Ltd.	Korea	Coated steel manufacturing and sales	3,412,000	56.87	219,723	108,421	108,421	108,421
POSCO Venture Capital Co., Ltd.	Korea	Investment in venture companies	19,700,000	95.00	134,886	103,780	103,780	103,780
POSCO CHEMCAL CO., LTD (Formerly, POSCO CHEMTECH)(*3)	Korea	Refractory manufacturing and sales	37,360,220	61.26	925,230	296,944	207,631	100,535
POSCO ES MATERIALS CO., LTD(*3)	Korea	Secondary battery active material manufacturing and sales	-	-	-	-	-	107,096
POSCO O&M Co., Ltd(Formerly, POSMATE)(*4,5)	Korea	Business facility maintenance	902,946	47.17	226,193	73,374	73,374	73,374
POSCO ICT	Korea	Computer hardware and software distribution	99,403,282	65.38	363,217	70,990	70,990	70,990
POSCO M-TECH(*5)	Korea	Packing materials manufacturing and sales	20,342,460	48.85	89,960	107,278	107,278	107,278
POSCO Family Strategy Fund	Korea	Investment in venture companies	419	69.91	42,866	42,412	29,596	32,457
Busan E&E Co,. Ltd.(*6)	Korea	Municipal solid waste fuel and power generation	6,029,660	70.00	51,202	30,148	30,148	30,148
Others (10 companies)	Korea				397,067	178,874	117,393	101,774
					9,397,443	6,295,213	5,904,846	6,301,448
[Foreign]								
PT. KRAKATAU POSCO(*7)	Indonesia	Steel manufacturing and sales	739,900	70.00	(61,702)	813,431	707,509	813,431
POSCO WA PTY LTD	Australia	Iron ore sales and mine development	622,380,552	100.00	407,237	640,720	640,720	635,736
POSCO Maharashtra Steel Private Limited	India	Steel manufacturing and sales	361,789,958	100.00	403,122	722,569	722,569	722,569
POSCO Canada Ltd.(*2)	Canada	Coal mine development	1,099,885	100.00	694,633	560,879	560,879	-
POSCO AUSTRALIA PTY LTD	Australia	Iron ore sales and mine development	761,775	100.00	495,440	330,623	330,623	330,623
Zhangjiagang Pohang Stainless Steel Co., Ltd.	China	Stainless steel manufacturing and sales	2,285,407,454	58.60	530,405	283,845	283,845	283,845
POSCO Thainox Public Company Limited(*8)	Thailand	Stainless steel manufacturing and sales	6,578,748,919	84.39	344,441	444,506	212,339	416,612
POSCO-China Holding Corp.	China	Investment management	-	100.00	508,763	593,841	593,841	593,841
POSCO-India Private Limited	India	Steel manufacturing and sales	764,999,999	99.99	84,434	184,815	75,567	75,567
POSCO MEXICO S.A. DE C.V.	Mexico	Plate steel manufacturing and sales	2,686,745,272	83.28	225,617	180,072	180,072	180,072
POSCO America Corporation	USA	Steel trading	437,941	99.45	84,311	192,156	192,156	192,156
POSCO-VIETNAM Co., Ltd.	Vietnam	Steel manufacturing and sales	-	100.00	4,202	160,572	160,572	160,572
POSCO VST CO., LTD.	Vietnam	Stainless steel manufacturing and sales	-	95.65	38,664	144,573	144,573	144,573
POSCO(Guangdong) Automotive Steel Co., Ltd.(*9)	China	Plate steel manufacturing and sales	-	83.64	64,618	130,751	52,936	130,751
POSCO COATED STEEL (THAILAND) CO., LTD	Thailand	Plate steel manufacturing and sales	36,000,000	100.00	91,284	121,592	121,592	121,592
POSCO Asia Co., Ltd.	Hong Kong	Steel and raw material trading	9,360,000	100.00	214,618	117,710	117,710	117,710
POSCO ASSAN TST STEEL INDUSTRY	Turkey	Steel manufacturing and sales	144,579,160	60.00	(65,178)	92,800	92,800	92,800
POSCO JAPAN Co., Ltd.	Japan	Steel trading	90,438	100.00	170,498	68,436	68,436	68,436
Qingdao Pohang Stainless Steel Co., Ltd.	China	Stainless steel manufacturing and sales	-	70.00	106,569	65,982	65,982	65,982
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	China	Steel manufacturing and sales	-	90.00	139,243	62,494	62,494	62,494
POSCO AFRICA (PROPRIETARY) LIMITED	South Africa	Mine development	1,390	100.00	34,774	50,297	50,297	50,297
POSCO-Malaysia SDN. BHD.	Malaysia	Steel manufacturing and sales	144,772,000	81.79	(16,905)	45,479	45,479	45,479
POSCO(Guangdong) Coated Steel Co., Ltd.(*10)	China	Plate steel sheet manufacturing and sales	-	-	-	-	-	31,299
POSCO Argentina S.A.U.	Argentina	Mineral exploration, manufacturing and sales	1,570,000	100.00	373,561	370,250	370,250	349,097
Others (30 companies)(*2,11)					738,869	1,151,633	485,668	406,124
					5,611,518	7,530,026	6,338,909	6,091,658
					₩ 15,008,961	13,825,239	12,243,755	12,393,106

(*1) During the year ended December 31, 2019, POSCO DAEWOO Corporation changed its name to POSCO INTERNATIONAL Corporation. Also, as of December 31, 2019, the Company performed the impairment test on investment in POSCO INTERNATIONAL Corporation due to continuous decline in fair value. Recoverable amount was determined based on its value in use, which is estimated from the present value of estimated future cash flows discounted at 6.84%. As a result of the impairment test, the Company has recognized ₩ 23,703 million of impairment loss.

(*2) During the year ended December 31, 2019, the Company merged with POSCO Processing&Service, and subsidiaries owned by POSCO Processing&Service, such as POSCO Canada Ltd., were newly added.

(*3) During the year ended December 31, 2019, POSCO CHEMTECH changed its name to POSCO CHEMICAL CO., LTD. and merged with POSCO ES MATERIALS CO., LTD.

(*4) During the year ended December 31, 2019, POSMATE changed its name to POSCO

O&M Co., Ltd.

(*5) The Company classified POSCO M-TECH and POSCO O&M Co., Ltd. as the investments in a subsidiary, considering additional facts and circumstances, such as the relative size of the voting rights held by the Company and the degree of diversification of other voting rights holders, although the Company holds less than half of the voting rights of POSCO M-TECH and POSCO O&M Co., Ltd.

(*6) As of December 31, 2019 and 2018, the investments in a subsidiary amounting to ₩30,148 million were provided as collateral in relation to the loan agreements of Busan E&E Co., Ltd.

(*7) As of December 31, 2019, the Company performed the impairment test on investment in PT. KRAKATAU POSCO. due to evidences of impairment such as full capital erosion. Recoverable amount was determined based on its value in use, which is estimated from the present value of estimated future cash flows discounted at 7.68%. As a result of the impairment test, the Company has recognized ₩105,922 million of impairment loss.

(*8) During the year ended December 31, 2019, Zhangjiagang Pohang Stainless Steel Co., Ltd. changed its name to POSCO (Zhangjiagang) Stainless Steel Co., Ltd.

(*9) As of December 31, 2019, the Company performed the impairment test on investment in POSCO Thainox Public Company Limited. due to evidences of impairment such as continuous decline in fair value. Recoverable amount was determined based on its value in use, which is estimated from the present value of estimated future cash flows discounted at 7.43%. As a result of the impairment test, the Company has recognized ₩204,272 million of impairment loss.

(*10) As of December 31, 2019, the Company performed impairment test on investment in POSCO (Guangdong) Automotive Steel Co., Ltd. due to evidences of impairment such as continuous loss. Recoverable amount was determined based on its value in use, which is estimated from the present value of estimated future cash flows discounted at 13.00%. As a result of the impairment test, the Company has recognized ₩77,814 million of impairment loss.

(*11) POSCO (Guangdong) Coated Steel Co., Ltd., was disposed during the year ended December 31, 2019, and impairment losses was recognized at the difference between the expected sale price and the book value, amounting to ₩6,435 million.

(*12) During the year ended December 31, 2019, the Company made additional investment of ₩391,144 million upon issue of shares by the subsidiary, POSCO SS VINA JOINT STOCK COMPANY (formerly, POSCO SS VINA Co., Ltd) and recognized full impairment.

(c) Details of associates and carrying amounts as of December 31, 2019 and 2018 are as follows:

(in millions of Won)

	Country	Principal operations	2019 Number of shares	2019 Ownership (%)	2019 Net asset value	2019 Acquisition cost	2019 Book value	2018 Book value
[Domestic]								
EQP POSCO Global NO1 Natural Resources PEF	Korea	Mine investment	169,316,307,504	31.64	₩ 515,873	169,316	169,316	169,316
SNNC	Korea	STS material manufacturing and sales	18,130,000	49.00	319,665	100,655	100,655	100,655
QSONE Co.,Ltd.(*1)	Korea	Real estate rental business	200,000	50.00	171,775	85,550	85,550	-
Others (7 companies)(*1)					19,442	543,884	22,468	19,052
					1,026,755	899,405	377,989	289,023
[Foreign]								
Nickel Mining Company SAS	New Caledonia	Raw material manufacturing and sales	3,234,698	49.00	140,183	189,197	189,197	189,197
7623704 Canada Inc.(*2)	Canada	Mine investment	114,452,000	10.40	1,276,856	124,341	124,341	124,341
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	China	Tinplate manufacturing and sales	-	24.00	50,181	11,003	11,003	11,003
Others (6 companies)					84,385	48,136	39,590	20,530
					1,551,605	372,677	364,131	345,071
					₩ 2,578,360	1,272,082	742,120	634,094

(*1) As of December 31, 2019, the company absorbed POSCO Processing & Service and newly added related companies such as QSONE, which was held by POSCO Processing & Service.

(*2) As of December 31, 2019, it was classified as an associate even though the Company's ownership percentage is less than 20% of ownership since the Company has significant influence over the investee when considering its structure of the Board of Directors and others.

(d) Details of joint ventures and carrying amounts as of December 31, 2019 and 2018 are as follows:

(in millions of Won)

	Country	Principal operations	2019 Number of shares	2019 Ownership (%)	2019 Net asset value	2019 Acquisition cost	2019 Book value	2018 Book value
Roy Hill Holdings Pty Ltd(*1)	Australia	Mine development	10,494,377	10.00	₩ 5,435,533	1,225,464	1,225,464	1,225,464
CSP - Compania Siderurgica do Pecem(*2)	Brazil	Steel manufacturing and sales	1,221,586,532	20.00	(289,718)	594,173	322,463	336,600
POSCO-NPS Niobium LLC	USA	Mine development	325,050,000	50.00	752,617	364,609	364,609	364,609
KOBRASCO	Brazil	Steel materials manufacturing and sales	2,010,719,185	50.00	231,282	98,962	98,962	98,962
Others (3 companies)					362,621	72,483	72,484	68,504
					₩ 6,492,335	2,355,691	2,083,982	2,094,139

(*1) As of December 31, 2019 and 2018, the investments in joint ventures amounting to ₩1,225,464 million were provided as collateral in relation to loans from project financing of Roy Hill Holdings Pty Ltd.

(*2) As of December 31, 2019, the Company performed the impairment test on investment in CSP - Compania Siderurgica do Pecem due to evidences of impairment including continuous loss. Recoverable amount was determined based on its value in use, which is estimated from the present value of estimated future cash flows discounted at 7.70%. As a result of the impairment test, the Company has recognized ₩52,491 million of impairment losses.

12. Investment Property, Net

(a) Investment property as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019				2018		
		Acquisition cost	Accumulated depreciation	Accumulated impairment	Book value	Acquisition cost	Accumulated depreciation	Book value
Land	₩	93,203	-	(1,465)	91,738	44,637	-	44,637
Buildings		164,234	(106,983)	(23)	57,228	150,630	(96,353)	54,277
Structures		23,244	(14,133)	-	9,111	22,508	(13,207)	9,301
	₩	280,681	(121,116)	(1,488)	158,077	217,775	(109,560)	108,215

The fair value of investment property as of December 31, 2019 is ₩ 617,987 million.

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

1) For the year ended December 31, 2019

(in millions of Won)		Beginning	Business Combination(*1)	Depreciation(*2)	Transfer(*3)	Ending
Land	₩	44,637	41,195	-	5,906	91,738
Buildings		54,277	25	(4,070)	6,996	57,228
Structures		9,301	-	(620)	430	9,111
	₩	108,215	41,220	(4,690)	13,332	158,077

(*1) This increases was due to business combination with POSCO Processing&Service.
(*2) The useful life and depreciation method of investment property are identical to those of property, plant and equipment.
(*3) Mainly includes assets transferred from property, plant and equipment in relation to change in rental ratio and the purpose of use.

2) For the year ended December 31, 2018

(in millions of Won)		Beginning	Depreciation(*1)	Transfer(*2)	Ending
Land	₩	38,035	-	6,602	44,637
Buildings		49,793	(3,715)	8,199	54,277
Structures		9,479	(596)	418	9,301
	₩	97,307	(4,311)	15,219	108,215

(*1) The useful life and depreciation method of investment property are identical to those of property, plant and equipment.
(*2) Mainly includes assets transferred from property, plant and equipment in relation to change in rental ratio and the purpose of use.

13. Property, Plant and Equipment, Net

(a) Property, plant and equipment as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019					2018				
		Acquisition cost	Accumulated depreciation	Accumulated impairment	Government grants	Book value	Acquisition cost	Accumulated depreciation	Accumulated impairment	Government grants	Book value
Land	₩	1,398,081	-	-	-	1,398,081	1,458,632	-	-	-	1,458,632
Buildings		6,143,768	(4,027,360)	(15,905)	-	2,100,503	6,078,950	(3,868,189)	(11,332)	-	2,199,429
Structures		4,653,513	(2,610,927)	(11,733)	-	2,030,853	4,936,474	(2,679,134)	(13,241)	-	2,244,099
Machinery and equipment		38,572,881	(25,861,776)	(108,670)	-	12,602,435	38,000,342	(24,892,883)	(195,992)	-	12,911,467
Vehicles		206,190	(196,239)	-	-	9,951	205,582	(198,242)	-	-	7,340
Tools		208,791	(181,503)	-	-	27,288	201,564	(177,700)	-	-	23,864
Furniture and fixtures		260,204	(221,416)	(459)	-	38,329	259,885	(223,247)	(351)	-	36,287
Lease assets		323,330	(60,962)	-	-	262,368	169,094	(26,293)	-	-	142,801
Construction-in-progress		2,527,266	-	(856,551)	(8,324)	1,662,391	1,982,037	-	(846,401)	(5,221)	1,130,415
	₩	54,294,024	(33,160,183)	(993,318)	(8,324)	20,132,199	53,292,560	(32,065,688)	(1,067,317)	(5,221)	20,154,334

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

1) For the year ended December 31, 2019

(in millions of Won)		Beginning	Acquisitions	Business Combination(*5)	Disposals	Depreciation	Impairment(*1)	Others(*2,4)	Ending
Land	₩	1,458,632	-	-	(1,805)	-	-	(58,746)	1,398,081
Buildings		2,199,429	7,157	67,751	(7,706)	(202,171)	(25,869)	61,912	2,100,503
Structures		2,244,099	10,777	39,783	(3,125)	(173,181)	(9,585)	(77,915)	2,030,853
Machinery and equipment		12,911,467	92,136	696,204	(21,616)	(1,717,864)	(176,295)	818,403	12,602,435
Vehicles		7,340	747	40	-	(6,244)	-	8,068	9,951
Tools		23,864	5,348	138	(24)	(11,499)	-	9,461	27,288
Furniture and fixtures		36,287	4,781	94	(9)	(9,805)	(137)	7,118	38,329
Lease assets(*3)		142,801	27,376	-	-	(34,669)	-	126,860	262,368
Construction-in-progress		1,130,415	1,838,490	696	-	-	(10,150)	(1,297,060)	1,662,391
	₩	20,154,334	1,986,812	804,706	(34,285)	(2,155,433)	(222,036)	(401,899)	20,132,199

(*1) The Company estimated recoverable amount for individual assets such as CEM and Fe-Si factories that ceased operations due to the disposal plan and others by calculating net fair value based on the appraisal value or scrap value and recognized an impairment loss since recoverable amounts are less than their carrying amounts for the year ended December 31, 2019.

(*2) During the year ended December 31, 2019, the Company decided to sell the rights related to the operation of LNG Terminal to POSCO ENERGY Co., Ltd and reclassified to assets for sale and liabilities for sale directly related the operation. As of December 31, 2019, the Company recognized ₩28,626 million of gain on disposal was recognized for the difference between the carrying amount and the sale price.

(*3) Right-of-use assets of ₩128,610 million recognized on the date of initial application (January 1, 2019) of the K-IFRS No. 1116 "Lease" are included in other changes.

(*4) It consists of the replacement of the main account of assets under construction, replacement of assets held for sale, and amounts replaced with investment property and intangible assets.

(*5) This has increased due to the business combination between the company and POSCO ENERGY's by-product power generation business.

2) For the year ended December 31, 2018

(in millions of Won)		Beginning	Acquisitions	Disposals	Depreciation	Impairment(*1,2)	Others(*3)	Ending
Land	₩	1,474,993	-	(9,763)	-	-	(6,598)	1,458,632
Buildings		2,334,399	11,743	(10,586)	(207,946)	(633)	72,452	2,199,429
Structures		2,352,008	9,837	(1,469)	(187,572)	(3,868)	75,163	2,244,099
Machinery and equipment		13,437,338	64,645	(47,128)	(1,677,476)	(88,642)	1,222,730	12,911,467
Vehicles		7,047	412	-	(5,197)	-	5,078	7,340
Tools		21,115	6,076	(3)	(10,785)	-	7,461	23,864
Furniture and fixtures		31,050	1,708	(39)	(8,231)	(7)	11,806	36,287
Lease assets		72,105	81,048	-	(10,352)	-	-	142,801
Construction-in-progress		1,831,215	1,608,023	-	-	(846,401)	(1,462,422)	1,130,415
	₩	21,561,270	1,783,492	(68,988)	(2,107,559)	(939,551)	(74,330)	20,154,334

(*1) During 2018, the Company evaluated future economic performance of its Synthetic Natural Gas (SNG) facility that was still in trial run stage. Considering the continuous decline in LNG price, increase in coal prices and the need for additional capital investment in the SNG facility, the Company concluded that the profitability of the SNG facility is unlikely to be sustainable and decided to terminate the operation of SNG facility as of December 31, 2018. The property, plant and equipment in the SNG facility are primarily comprised of machinery and equipment, among which assets with a carrying value of ₩180,238 million are expected to be re-used in other facilities of the Company therefore no impairment test was conducted. For the remaining assets impairment test was performed by estimating the recoverable amount of each individual assets. For the assets which are determined to be technically obsolete and therefore sale is unlikely, recoverable amount is determined at their expected scrap value less cost of disposal.
For the assets for which sale is probable, the recoverable amount is determined based on fair value less cost of disposal. Fair value was measured using cost approach, which is estimated based on the current cost to purchase or replace the asset less applicable depreciation and obsolescence. Specifically, the Company used indirect cost approach to estimate the replacement cost for a new asset by applying asset specific inflation factors to the asset's historical cost and deducting depreciation for physical deterioration. Depreciation factors are applied primarily based on estimated useful life of the asset and declining balance depreciation method. The fair value measurement of assets in SNG facility is considered to be level 3 because significant inputs used in the estimate, such as asset specific inflation factors and estimated useful lives, are unobservable.
As a result of the impairment test, the Company recognized an impairment loss of ₩877,764 million in connection with the property, plant and equipment in the SNG facility.

(*2) The Company has recognized ₩61,787 million of impairment losses since recoverable amount on Strip Casting facilities was less than their carrying amount for the year ended December 31, 2018.

(*3) Represents assets transferred from construction-in-progress to intangible assets and other property, plant and equipment, assets transferred to investment property and others.

(c) Borrowing costs capitalized and the capitalized interest rate for the years ended December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Weighted average expenditure	₩	562,530	444,586
Borrowing costs capitalized		21,457	15,736
Capitalization rate		3.81%	3.54%

(d) Information on lease agreements for which the Company is a lessee is as follows:

1) Right-of-use assets

(in millions of Won)		Beginning (The date of initial application)	Acquisitions	Depreciation	Others	Ending
Buildings	₩	78,384	-	(6,463)	-	71,921
Structures		53,761	13,502	(2,830)	-	64,434
Machinery and equipment		65,698	-	(5,500)	-	60,198
Vehicles		7,256	-	(500)	-	6,755
Furniture and fixtures		66,312	13,874	(19,376)	(1,749)	59,060
	₩	271,411	27,376	(34,669)	(1,749)	262,368

2) Amount recognized in profit or loss

(in millions of Won)		2019
Interest on lease liabilities	₩	8,709
Expenses relating to short-term leases		1,898
Expenses relating to leases of low-value assets		6,881
	₩	17,488

14. Intangible Assets, Net

(a) Intangible assets as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019				2018			
		Acquisition cost	Accumulated amortization	Accumulated impairment	Book value	Acquisition cost	Accumulated amortization	Accumulated impairment	Book value
Intellectual property rights	₩	49,052	(24,507)	-	24,545	45,423	(21,046)	-	24,377
Membership		85,929	-	(3,272)	82,657	76,806	-	(3,623)	73,183
Development expense		431,984	(345,961)	-	86,023	399,001	(307,243)	-	91,758
Port facilities usage rights		683,387	(405,315)	-	278,072	725,151	(419,441)	-	305,710
Construction-in-progress		137,273	-	-	137,273	58,561	-	-	58,561
Other intangible assets		376,212	(264,035)	(11,832)	100,345	362,493	(259,028)	(11,832)	91,633
	₩	1,763,837	(1,039,818)	(15,104)	708,915	1,667,435	(1,006,758)	(15,455)	645,222

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

1) For the year ended December 31, 2019

(in millions of Won)		Beginning	Acquisitions	Disposals	Amortization	Transfer(*2)	Ending
Intellectual property rights	₩	24,377	-	(1,270)	(5,678)	7,116	24,545
Membership(*1)		73,183	9,204	(6)	-	276	82,657
Development expense		91,758	2,205	-	(41,793)	33,853	86,023
Port facilities usage rights		305,710	-	(4,674)	(22,964)	-	278,072
Construction-in-progress		58,561	114,638	-	-	(35,926)	137,273
Other intangible assets		91,633	615	(4,568)	(6,755)	19,420	100,345
	₩	645,222	126,662	(10,518)	(77,190)	24,739	708,915

(*1) Economic useful life of membership is indefinite.
(*2) Represents assets transferred from construction-in-progress to intangible assets and assets transferred from property, plant and equipment, and others.

2) For the year ended December 31, 2018

(in millions of Won)		Beginning	Acquisitions	Disposals	Amortization	Impairment(*2)	Transfer(*3)	Ending
Intellectual property rights	₩	24,177	-	(401)	(5,041)	-	5,642	24,377
Membership(*1)		48,277	26,869	(573)	-	(1,007)	(383)	73,183
Development expense		74,805	1,901	-	(33,997)	-	49,049	91,758
Port facilities usage rights		310,039	-	-	(23,001)	-	18,672	305,710
Construction-in-progress		55,292	59,257	-	-	-	(55,988)	58,561
Other intangible assets		15,484	75,676	-	(7,062)	(10)	7,545	91,633
	₩	528,074	163,703	(974)	(69,101)	(1,017)	24,537	645,222

(*1) Economic useful life of membership is indefinite.
(*2) The Company has recognized impairment losses on some other intangible assets since the recoverable amounts were less than carrying amounts.
(*3) Represents assets transferred from construction-in-progress to intangible assets and assets transferred from property, plant and equipment, and others.

15. Other Assets

Other current assets and other long-term assets as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Current			
Advance payments	₩	6,252	4,157
Prepaid expenses		21,849	19,385
	₩	28,101	23,542
Non-current			
Long-term prepaid expenses	₩	5,088	5,089
Others(*1)		100,186	53,184
	₩	105,274	58,273

(*1) As of December 31, 2019 and 2018, the Company recognized tax assets amounting to ₩97,185 million and ₩50,112 million 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 and claim for rectification are finalized.

16. Borrowings

(a) Borrowings as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Short-term borrowings			
Short-term borrowings	₩	167,021	476,612
Current portion of long-term borrowings		-	375
Current portion of debentures		980,460	350,000
Less: Current portion of discount on debentures issued		(1,005)	(125)
	₩	1,146,476	826,862
Long-term borrowings			
Long-term borrowings	₩	1,181	1,141
Debentures		5,216,681	3,456,367
Less: Discount on debentures issued		(26,325)	(13,400)
	₩	5,191,537	3,444,108

(b) Short-term borrowings as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Short-term borrowings	₩	-	300,000
Transfers of account receivables that do not qualify for derecognition		167,021	176,612
	₩	167,021	476,612

(c) Current portion of long-term borrowings as of December 31, 2019 and 2018 are as follows:

(in millions of Won)	Lenders	Issuance date	Maturity date	Annual interest rate (%)		2019	2018
Borrowings	-	-	-	-	₩	-	375
Debentures	Domestic debentures 306-2	2013.10.04	2020.10.04	3.50		169,930	349,875
Foreign debentures	Global debentures 2	2010.10.28	2020.10.28	4.25		809,525	-
					₩	979,455	350,250

(d) Long-term borrowings excluding current portion, as of December 31, 2019 and 2018 are as follows:

(in millions of Won)	Lenders	Issuance date	Maturity date	Annual interest rate (%)		2019	2018
Borrowings	-	-	-	-	₩	-	-
Foreign borrowings	KOREA ENERGY AGENCY	2007.12.27~ 2008.12.29	2022.12.29	3 year Government bond		1,181	1,141
Debentures	Domestic debentures 304-2 and others	2011.11.28~ 2019.10.16	2021.05.03~ 2029.10.16	1.56~4.12		2,504,194	1,177,704
Foreign debentures	Japan Yen private bond and others	2011.04.14~ 2019.11.12	2021.04.14~ 2024.07.25	2.38~5.25		2,686,162	2,265,263
					₩	5,191,537	3,444,108

17. Other Payables

Other payables as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Current			
Accounts payable	₩	630,162	590,424
Accrued expenses		432,835	434,379
Dividend payable		2,296	2,764
Lease liabilities(*1)		40,463	10,116
Withholdings		7,247	35,050
	₩	1,113,003	1,072,733
Non-current			
Long-term accrued expenses	₩	842	10,964
Lease liabilities(*1)		216,508	131,646
Long-term withholdings		5,452	1,733
	₩	222,802	144,343

(*1) As of December 31, 2019, the Company recognized additional lease liabilities of ₩125,109 million upon initial application of K-IFRS No. 1116 "Leases".

18. Other Financial Liabilities

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

(in millions of Won)		2019	2018
Current			
Financial guarantee liabilities	₩	10,969	12,638
Non-current			
Derivative liabilities	₩	8,285	34,743
Financial guarantee liabilities		38,640	45,193
	₩	46,925	79,936

19. Provisions

(a) Provisions as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019		2018	
		Current	Non-current	Current	Non-current
Provision for bonus payments(*1,2)	₩	14,020	35,816	9,786	26,963
Provision for restoration(*3)		6,783	15,942	9,379	20,324
Provision for legal contingencies and claims(*4)		204	2,184	-	46,432
	₩	21,007	53,942	19,165	93,719

(*1) Represents the provision for bonuses limited to 33% ~ 67% of annual salaries for executives.

(*2) During the December 31, 2019 and 2018, the Company measured the present value of the estimated future payments based on actuarial evaluations of the Long Term Service Awards in operation, and provisions were recognized at ₩29,299 million and ₩ 29,126 million, respectively.

(*3) Due to contamination of land near the Company's magnesium smelting plant located in Gangneung province and others, the Company recognized present values of estimated costs for recovery as provisions for restoration as of December 31, 2019. 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 discount rates of 1.74%~1.84% to assess present value of these costs.

(*4) The Company has recognized provisions for certain litigations and other contingencies for the year ended December 31, 2019.

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

1) For the year ended December 31, 2019

(in millions of Won)		Beginning	Increase	Reversal	Utilization	Transfer	Ending
Provision for bonus payments	₩	36,749	23,523	-	(18,038)	7,602	49,836
Provision for restoration		29,703	549	(277)	(7,250)	-	22,725
Provision for legal contingencies and claims		46,432	538	(11,207)	(33,375)	-	2,388
	₩	112,884	24,610	(11,484)	(58,663)	7,602	74,949

2) For the year ended December 31, 2018

(in millions of Won)		Beginning	Increase	Utilization	Ending
Provision for bonus payments	₩	5,893	45,827	(14,971)	36,749
Provision for restoration		29,471	9,097	(8,865)	29,703
Provision for legal contingencies and claims		2,052	44,380	-	46,432
	₩	37,416	99,304	(23,836)	112,884

20. Employee Benefits

(a) Defined contribution plans

The expense related to post-employment benefit plans under defined contribution plans for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Expense related to post-employment benefit plans under defined contribution plans	₩	33,598	31,324

(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, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Present value of funded obligations	₩	1,435,942	1,265,675
Fair value of plan assets		(1,381,796)	(1,264,812)
Net defined benefit liabilities	₩	54,146	863

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

(in millions of Won)		2019	2018
Defined benefit obligation at the beginning of period	₩	1,265,675	1,108,876
Current service costs		119,957	111,033
Interest costs		31,567	33,757
Remeasurement :		104,442	132,868
- Loss from change in financial assumptions		72,730	113,977
- Loss from change in demographic assumptions		94	-
- Loss from change in others		31,618	18,891
Amount transferred from associate		-	241
Business combination		317	-
Reclassification to liabilitiess directly related to assets held for sale		(1,448)	-
Benefits paid		(84,568)	(121,100)
Defined benefit obligation at the end of period	₩	1,435,942	1,265,675

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

(in millions of Won)		2019	2018
Fair value of plan assets at the beginning of period	₩	1,264,812	1,108,833
Interest on plan assets		32,347	33,756
Remeasurement of plan assets		(6,668)	(13,416)
Contributions to plan assets		161,500	240,440
Business combination		670	-
Reclassification to liabilitiess directly related to assets held for sale		(1,448)	-
Benefits paid		(69,417)	(104,801)
Fair value of plan assets at the end of period	₩	1,381,796	1,264,812

The Company expects to make an estimated contribution of ₩150,000 million to the defined benefit plan assets in 2020.

4) The fair value of plan assets as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Debt instruments	₩	755,228	511,406
Deposits		626,282	748,230
Others		286	5,176
	₩	1,381,796	1,264,812

5) The amounts recognized in the statements of comprehensive income for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Current service costs	₩	119,957	111,033
Net interest costs(*1)		(780)	1
	₩	119,177	111,034

(*1) The actual return on plan assets amounted to ₩25,679 million and ₩20,340 million for the years ended December 31, 2019 and 2018, respectively.

The above expenses by function were as follows:

(in millions of Won)		2019	2018
Cost of sales	₩	91,478	83,615
Selling and administrative expenses		26,855	26,367
Others		844	1,052
	₩	119,177	111,034

6) Remeasurements of defined benefit plans, net of tax recognized in other comprehensive income (loss) for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Beginning	₩	(288,627)	(182,571)
Remeasurements of defined benefit plans		(111,110)	(146,284)
Tax effects		30,556	40,228
Ending	₩	(369,181)	(288,627)

7) The principal actuarial assumptions as of December 31, 2019 and 2018 are as follows:

	2019	2018
Discount rate	2.10%	2.60%
Expected future increases in salaries(*1)	4.80%	4.60%

(*1) The expected future increases in salaries are 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 assumption, holding the other assumptions constant, would have affected the defined benefit obligation by the amounts shown below:

(in millions of Won)		1% Increase		1% Decrease	
		Amount	Percentage (%)	Amount	Percentage (%)
Discount rate	₩	(102,014)	(7.1)	120,255	8.4
Expected future increases in salaries		121,680	8.5	(104,953)	(7.3)

9) As of December 31, 2019 the maturity of the expected benefit payments are as follows:

(in millions of Won)		Within 1 year	1 year - 5 years	5 years - 10 years	10 years - 20 years	After 20 years	Total
Benefits to be paid	₩	170,998	546,806	254,736	439,015	275,184	1,686,739

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

21. Other Liabilities

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

(in millions of Won)		2019	2018
Current			
Advances received	₩	5,112	9,902
Withholdings		106,474	25,034
Unearned revenue		23,562	19,870
	₩	135,148	54,806
Non-current			
Unearned revenue	₩	5,230	15,264

22. Financial Instruments

(a) Classification and fair value of financial instruments

1) The carrying amount and the fair values of financial assets and financial liabilities by fair value hierarchy as of December 31, 2019 and 2018 are as follows:

① December 31, 2019

(in millions of Won)

			Fair value			
		Book value	Level 1	Level 2	Level 3	Total
Financial assets						
Fair value through profit or loss						
Derivate assets	₩	79,675	-	79,675	-	79,675
Short-term financial instruments		6,258,292	-	6,258,292	-	6,258,292
Debt securities		8,050	-	-	8,050	8,050
Other securities		55,972	-	-	55,972	55,972
Other receivables		2,000	-	-	2,000	2,000
Fair value through other comprehensive income						
Equity securities		1,128,641	762,198	-	366,443	1,128,641
Debt securities		1,686	-	-	1,686	1,686
Financial assets measured at amortized cost(*1)						
Cash and cash Equivalents		978,139	-	-	-	-
Trade accounts and notes receivable		3,983,573	-	-	-	-
Debt securities		290,000	-	-	-	-
Other receivables		202,819	-	-	-	-
Deposit instruments		1,294,559	-	-	-	-
	₩	14,283,406	762,198	6,337,967	434,151	7,534,316
Financial liabilities						
Fair value through profit or loss						
Derivative liabilities	₩	8,285	-	8,285	-	8,285
Financial liabilities measured at amortized cost(*1)						
Trade accounts and notes payable		667,551	-	-	-	-
Borrowings		6,338,012	-	6,525,464	-	6,525,464
Financial guarantee liabilities		49,609	-	-	-	-
Others		1,325,336	-	-	-	-
	₩	8,388,793	-	6,533,749	-	6,533,749

(*1) Fair value of financial assets and liabilities measured at amortized cost except borrowings approximates carrying amounts.

② December 31, 2018

(in millions of Won)			Fair value			
		Book value	Level 1	Level 2	Level 3	Total
Financial assets						
Fair value through profit or loss						
Derivate assets	₩	1,265	-	1,265	-	1,265
Short-term financial instruments		5,776,407	-	5,776,407	-	5,776,407
Debt securities		8,050	-	-	8,050	8,050
Other securities		61,701	-	-	61,701	61,701
Other receivables		2,000	-	-	2,000	2,000
Fair value through other comprehensive income						
Equity securities		1,104,092	874,772	-	229,320	1,104,092
Debt securities		1,638	-	-	1,638	1,638
Financial assets measured at amortized cost(*1)						
Cash and cash Equivalents		259,219	-	-	-	-
Trade accounts and notes receivable		3,967,091	-	-	-	-
Other receivables		158,256	-	-	-	-
Deposit instruments		1,248,747	-	-	-	-
		12,588,466	874,772	5,777,672	302,709	6,955,153
Financial liabilities						
Fair value through profit or loss						
Derivative liabilities	₩	34,743	-	34,743	-	34,743
Financial liabilities measured at amortized cost(*1)						
Trade accounts and notes payable		1,106,226	-	-	-	-
Borrowings		4,270,970	-	4,398,178	-	4,398,178
Financial guarantee liabilities		57,831	-	-	-	-
Others		1,206,529	-	-	-	-
	₩	6,676,299	-	4,432,921	-	4,432,921

(*1) Fair value of financial assets and liabilities measured at amortized cost except borrowings approximates carrying amounts.

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

Fair values of financial instruments are calculated based on the derivatives instrument valuation model such as market approach method and discounted cash flow method. Inputs of the financial instrument valuation model include interest rate, exchange rate, spot price of underlying assets, volatility and others. It may change depending on the type of derivatives and the nature of the underlying assets.

3) 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, 2019 are as follows:

(in millions of Won)		Fair value	Valuation technique	Inputs	Range of inputs	Effect on fair value assessment with unobservable input
Financial assets at fair value	₩	292,453	Discounted cash flows	Discount rate	8.30%	As discount rate increases, fair value decreases
		141,698	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, 2019 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
Financial assets at fair value	Fluctuation 0.5% of discount rate	₩	18,589	17,010

③ Changes in fair value of financial assets and financial liabilities classified as Level 3 for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Beginning	₩	302,709	299,301
Acquisition		30,623	-
Gain or loss on valuation of financial assets		(3,677)	2,257
Other comprehensive income		109,460	37,598
Disposal and others		(4,964)	(36,447)
Ending	₩	434,151	302,709

4) Financial liabilities were recognized in connection with financial guarantee contracts as of December 31, 2019. The details of the amount of guarantees provided are as follows:

(in millions of Won)

Guarantee beneficiary	Financial institution		Guarantee limit: Foreign currency	Guarantee limit: Won equivalent	Guarantee amount: Foreign currency	Guarantee amount: Won equivalent
Subsidiaries						
POSCO Maharashtra	SCB	USD	33,784,000	39,115	33,784,000	39,115
Steel Private Limited	ING	USD	50,000,000	57,890	50,000,000	57,890
POSCO ASSAN TST	SMBC	USD	62,527,500	72,394	56,274,750	65,155
STEEL INDUSTRY	ING	USD	60,000,000	69,468	54,000,000	62,521
	BNP	USD	24,000,000	27,787	21,600,000	25,008
POSCO Asia Co., Ltd.	BOC	USD	50,000,000	57,890	50,000,000	57,890
	Credit Agricole	USD	50,000,000	57,890	50,000,000	57,890
POSCO MEXICO S.A. DE C.V	CITI BANAMEX	USD	30,000,000	34,734	30,000,000	34,734
	BOA	USD	30,000,000	34,734	30,000,000	34,734
	SMBC	USD	20,000,000	23,156	20,000,000	23,156
	MIZUHO	USD	20,000,000	23,156	20,000,000	23,156
	ANZ	USD	20,000,000	23,156	20,000,000	23,156
POSCO SS VINA JOINT STOCK	ANZ	USD	100,000,000	115,780	100,000,000	115,780
COMPANY (Formerly, POSCO	HSBC	USD	100,000,000	115,780	100,000,000	115,780
SS VINA Co., Ltd.) (*1)	Credit Agricole	USD	50,000,000	57,890	50,000,000	57,890
	SMBC	USD	48,000,000	55,574	48,000,000	55,574
POSCO-VIETNAM Co., Ltd.	SMBC	USD	50,000,000	57,890	50,000,000	57,890
	Credit Agricole	USD	40,000,000	46,312	40,000,000	46,312
	BTMU	USD	26,000,000	30,103	26,000,000	30,103
	Citi	USD	20,000,000	23,156	20,000,000	23,156
	MIZUHO	USD	20,000,000	23,156	20,000,000	23,156
PT. KRAKATAU POSCO	Export-Import Bank of Korea	USD	567,000,000	656,473	396,288,870	458,823
	SMBC	USD	140,000,000	162,092	97,998,783	113,463
	BTMU	USD	119,000,000	137,778	81,954,783	94,887
	MIZUHO	USD	105,000,000	121,569	72,313,043	83,724
	SCB	USD	107,800,000	124,811	75,822,783	87,788
	Credit Suisse AG	USD	91,000,000	105,360	62,671,304	72,561
	HSBC	USD	91,000,000	105,360	62,671,304	72,561
	ANZ	USD	73,500,000	85,098	52,200,522	60,438
	BOA	USD	35,000,000	40,523	24,104,348	27,908
	The Tokyo Star Bank, Ltd	USD	21,000,000	24,314	14,462,609	16,745
POSCO COATED STEEL (THAILAND) CO., LTD.	The Great & Co.	THB	5,501,000,000	212,669	5,501,000,000	212,669
Associates						
Nickel Mining Company SAS	SMBC	EUR	46,000,000	59,682	46,000,000	59,682
LLP POSUK Titanium	SMBC	USD	15,000,000	17,367	15,000,000	17,367
Joint ventures						
CSP - Compania	Export-Import Bank of Korea	USD	182,000,000	210,720	163,396,219	189,180
Siderurgica do Pecem	Santander	USD	47,600,000	55,111	42,033,882	48,667
	BNP	USD	47,600,000	55,111	42,033,882	48,667
	MIZUHO	USD	47,600,000	55,111	42,033,882	48,667
	Credit Agricole	USD	20,000,000	23,156	17,661,302	20,448
	SOCIETE GENERALE	USD	20,000,000	23,156	17,661,302	20,448
	KfW	USD	20,000,000	23,156	17,661,302	20,448
	BBVA Seoul	USD	17,600,000	20,377	15,541,930	17,994
	ING	USD	17,600,000	20,377	15,541,930	17,994
	BNDES	BRL	464,060,000	133,672	464,060,000	133,672
		USD	2,689,611,500	3,114,031	2,218,712,730	2,568,824
		EUR	46,000,000	59,682	46,000,000	59,682
		THB	5,501,000,000	212,669	5,501,000,000	212,669
		BRL	464,060,000	133,672	464,060,000	133,672

(*1) During the December 31, 2019, POSCO SS VINA Co., Ltd. changed its name to POSCO SS VINA JOINT STOCK COMPANY.

5) Finance income and costs by category of financial instrument for the years ended December 31, 2019 and 2018 were as follows:

① For the year ended December 31, 2019

(in millions of Won)		Finance income and costs							
		Interest income (expense)	Dividend income(*1)	Gain and loss on foreign currency	Gain and loss on disposal	Gain and loss on valuation	Others	Total	Other comprehensive income (loss)
Financial assets at fair value through profit or loss	₩	131,743	-	-	760	83,610	-	216,113	-
Financial assets at fair value through other comprehensive income		-	60,264	-	-	-	-	60,264	14,955
Financial assets measured at amortized cost		39,469	-	78,190	-	-	-	117,659	-
Financial liabilities at fair value through profit or loss		-	-	-	805	26,459	-	27,264	-
Financial liabilities measured at amortized cost		(158,810)	-	(125,398)	-	-	9,184	(275,024)	-
	₩	12,402	60,264	(47,208)	1,565	110,069	9,184	146,276	14,955

(*1) Finance income in the statement of comprehensive income includes the dividends from subsidiaries, associates and joint ventures of ₩214,164 million for the year ended December 31, 2019.

② For the year ended December 31, 2018

(in millions of Won)		Finance income and costs							
		Interest income (expense)	Dividend income(*1)	Gain and loss on foreign currency	Gain and loss on disposal	Gain and loss on valuation	Others	Total	Other comprehensive income (loss)
Financial assets at fair value through profit or loss	₩	131,903	-	-	1,199	3,522	-	136,624	-
Financial assets at fair value through other comprehensive income		-	76,829	-	-	-	-	76,829	(131,646)
Financial assets measured at amortized cost		27,769	-	12,660	-	-	-	40,429	-
Financial liabilities at fair value through profit or loss		-	-	-	11,420	40,090	-	51,510	-
Financial liabilities measured at amortized cost		(143,233)	-	(129,124)	-	-	7,860	(264,497)	-
	₩	16,439	76,829	(116,464)	12,619	43,612	7,860	40,895	(131,646)

(*1) Finance income in the statement of comprehensive income includes the dividends from subsidiaries, associates and joint ventures of ₩130,719 million for the year ended December 31, 2018.

(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, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Cash and cash equivalents	₩	978,139	259,219
Derivative assets		79,675	1,265
Short-term financial instrument		6,258,292	5,776,407
Debt securities		299,736	9,688
Other securities		55,972	61,701
Other receivables		204,819	160,256
Trade accounts and notes receivable		3,983,573	3,967,091
Deposit instruments		1,294,559	1,248,747
	₩	13,154,765	11,484,374

The Company provided financial guarantee for the repayment of loans of subsidiaries, associates, and joint ventures. As of December 31, 2019 and 2018, the maximum exposure to credit risk caused by financial guarantee amounted to ₩2,974,847 million and ₩3,171,871million, respectively.

2) Impairment losses on financial assets

The Company assesses the expected credit loss on trade accounts and notes receivable, and other receivables by estimating the default rates based on the following three years of credit loss experience and overdue conditions. The Company assesses the credit loss individually for credit-impaired assets and some other receivables.

① Allowance for doubtful accounts as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Trade accounts and notes receivable	₩	13,965	22,575
Other accounts receivable		5,268	5,584
Loans		11,561	11,265
	₩	30,794	39,424

② Impairment losses on financial assets for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Bad debt expenses	₩	(4,248)	3,661

③ The aging and allowance for doubtful accounts of trade accounts and notes receivable as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019		2018	
		Trade accounts and notes receivable	Allowance for doubtful accounts	Trade accounts and notes receivable	Allowance for doubtful accounts
Not due	₩	3,972,557	1,060	3,786,143	1,291
Over due less than 1 month		3,326	40	186,676	4,607
1 month - 3 months		242	-	153	5
3 months - 12 months		22	-	791	23
Over 12 months		21,392	12,865	24,857	16,649
	₩	3,997,538	13,965	3,998,620	22,575

④ The aging and allowance for doubtful accounts of loans and other account receivable as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019		2018	
		Loans and other account receivable	Allowance for doubtful accounts	Loans and other account receivable	Allowance for doubtful accounts
Not due	₩	158,950	8,611	140,271	8,327
Over due less than 1 month		443	-	106	-
1 month - 3 months		4	-	163	-
3 months - 12 months		3,082	-	2,950	2,950
Over 12 months		8,357	8,218	5,635	5,572
	₩	170,836	16,829	149,125	16,849

⑤ Changes in the allowance for doubtful accounts for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Beginning	₩	39,424	39,879
Initial application of K-IFRS No. 1109		-	70
Bad debt expenses		(4,248)	3,661
Others		(4,382)	(4,186)
Ending	₩	30,794	39,424

(c) Liquidity risk

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

(in millions of Won)		Book value	Contractual cash flow	Within 3 months	3 months - 6 months	6 months - 1 year	1 year - 5 years	After 5 years
Trade accounts and notes payable	₩	667,551	667,551	667,551	-	-	-	-
Borrowings		6,338,012	6,896,826	201,496	62,461	1,079,216	5,160,835	392,818
Financial guarantee liabilities(*1)		49,609	2,974,847	2,974,847	-	-	-	-
Lease liabilities		256,971	295,144	12,652	12,409	23,581	161,989	84,513
Others		1,076,650	1,076,650	1,054,824	-	7,246	14,580	-
	₩	8,388,793	11,911,018	4,911,370	74,870	1,110,043	5,337,404	477,331

(*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.

(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, 2019 and 2018 are as follows:

(in millions of Won)		2019		2018	
		Assets	Liabilities	Assets	Liabilities
USD	₩	1,514,066	3,653,541	982,856	2,742,712
JPY		54,371	173,559	18,809	170,291
CNY		402,515	1,144	351,550	891
INR		293,015	-	427,151	-
Others		254,778	97,322	260,553	7,856
	₩	2,518,745	3,925,566	2,040,919	2,921,750

2) As of December 31, 2019 and 2018, 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, 2019 and 2018 were as follows:

(in millions of Won)		2019		2018	
		10% increase	10% decrease	10% increase	10% decrease
USD	₩	(213,948)	213,948	(175,986)	175,986
JPY		(11,919)	11,919	(15,148)	15,148
CNY		40,137	(40,137)	35,066	(35,066)
INR		29,302	(29,302)	42,715	(42,715)

(e) Interest rate risk

1) The carrying amount of interest-bearing financial instruments as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Fixed rate			
Financial assets	₩	8,856,339	7,312,049
Financial liabilities		(6,593,802)	(4,411,216)
	₩	2,262,537	2,900,833
Variable rate			
Financial liabilities	₩	(1,181)	(1,516)

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

The Company's interest rate risk mainly arises from borrowings with variable interest rate. As of December 31, 2019 and 2018, 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, 2019 and 2018 were as follows:

(in millions of Won)		2019		2018	
		1% increase	1% decrease	1% increase	1% decrease
Variable rate financial instruments	₩	(12)	12	(15)	15

23. Share Capital and Capital Surplus

(a) Share capital as of December 31, 2019 and 2018 are as follows:

(in Won, except per share information)		2019	2018
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, 2019, total shares of ADRs of 34,827,912 are equivalent to 8,706,978 of common stock.
(*2) As of December 31, 2019, 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, 2019 and 2018 were as follows:

(Share)	2019			2018		
	Issued shares	Treasury shares	Number of outstanding shares	Issued shares	Treasury shares	Number of outstanding shares
Beginning	87,186,835	(7,185,703)	80,001,132	87,186,835	(7,187,231)	79,999,604
Disposal of treasury shares	-	114,509	114,509	-	1,528	1,528
Ending	87,186,835	(7,071,194)	80,115,641	87,186,835	(7,185,703)	80,001,132

(c) Capital surplus as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Share premium	₩	463,825	463,825
Gain on disposal of treasury shares		796,623	784,047
Loss from merger		(6,441)	(91,310)
Loss on disposal of hybrid bonds		(1,787)	(1,787)
	₩	1,252,220	1,154,775

24. Hybrid Bonds

(a) Hybrid bonds classified as equity as of December 31, 2019 and 2018 are as follows:

(in millions of Won)	**Date of issue**	**Date of maturity**	**Rate of interest (%)**		**2019**	**2018**
Hybrid bond 1-2(*1)	2013-06-13	2043-06-13	4.60		200,000	200,000
Issuance cost					(616)	(616)
				₩	199,384	199,384

(*1) Details of hybrid bonds as of December 31, 2019 are as follows:

	Hybrid bond 1-2
Maturity date	30 years (The Company has a right to extend the maturity date)
Interest rate	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 10 and interest payment date afterwards

The hybrid bond holders' preference in the event of liquidation is higher than the common stock holders, but lower than other creditors. The interest accumulated but not paid on the hybrid bonds as of December 31, 2019 amounts to ₩479 million.

25. Reserves

(a) Reserves as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		**2019**	**2018**
Changes in fair value of equity investments at fair value through other comprehensive income	₩	(183,930)	(207,191)

(b) Changes in fair value of equity investments at fair value through other comprehensive income and changes in unrealized fair value of available-for-sale investments for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Beginning balance	₩	(207,191)	233,390
Initial appilcation of K-IFRS No. 1109		-	(321,654)
Changes in fair value of equity investments		20,628	(176,756)
Reclassification to profit or loss upon disposal		11,457	12,719
Tax effects		(8,824)	45,110
Ending balance	₩	(183,930)	(207,191)

26. Treasury Shares

Based on the Board of Director's resolution, the Company holds treasury shares for the business purposes including price stabilization. The changes in treasury shares for the years ended December 31, 2019 and 2018 were as follows:

(shares, in millions of Won)	2019			2018		
	Number of shares		Amount	Number of shares		Amount
Beginning	7,185,703	₩	1,532,728	7,187,231	₩	1,533,054
Disposal of treasury shares	(114,509)		(24,425)	(1,528)		(326)
Ending	7,071,194	₩	1,508,303	7,185,703	₩	1,532,728

27. Retained Earnings

(a) Retained earnings as of December 31, 2019 and 2018 are summarized as follows:

(in millions of Won)		2019	2018
Legal reserve	₩	241,202	241,202
Reserve for business rationalization		918,300	918,300
Reserve for research and manpower development		-	136,667
Appropriated retained earnings for business expansion		42,610,500	41,510,500
Appropriated retained earnings for dividends		412,243	944,103
Unappropriated retained earnings		1,190,166	1,424,687
	₩	45,372,411	45,175,459

(b) Statements of appropriation of retained earnings as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Retained earnings before appropriation			
Unappropriated retained earnings carried over from prior year	₩	593,208	574,596
Cumulative effect of accounting changes		-	320,720
Remeasurements of defined benefit plans		(80,554)	(106,057)
Loss on disposal of equity securities		(8,306)	(12,719)
Interests of hybrid bonds		(9,200)	(24,443)
Interim dividends (Dividends (ratio) per share ₩6,000 (120%) in 2019 ₩5,000 (100%) in 2018)		(480,694)	(400,003)
Profit for the period		1,175,712	1,072,592
		1,190,166	1,424,686
Transfer from discretionary reserve			
Reserve for research and manpower development		-	136,667
Appropriated retained earnings for dividends		412,243	531,861
		412,243	668,528
Appropriation of retained earnings			
Dividends (Dividends (ratio) per share ₩4,000 (80%) in 2019 ₩5,000 (100%) in 2018)		320,463	400,006
Appropriated retained earnings for business expansion		700,000	1,100,000
		1,020,463	1,500,006
Unappropriated retained earnings carried forward to subsequent year	₩	581,946	593,208

28. Revenue

(a) Details of revenue disaggregated by types of revenue and timing of revenue recognition for the years ended December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Types of revenue			
Sales of steel product	₩	29,359,408	29,676,951
Transportation services		776,589	707,829
Others		237,514	274,645
	₩	30,373,511	30,659,425
Timing of revenue recognition			
Revenue recognized at a point in time	₩	29,528,658	29,890,627
Revenue recognized over time		844,853	768,798
	₩	30,373,511	30,659,425

(b) Details of contract assets and liabilities from contracts with customers as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019	2018
Receivables			
Account receivables	₩	3,983,573	3,967,091
Contract assets			
Account receivables		9,482	8,954
Contract liabilities			
Advance received		5,112	9,902
Unearned income		28,484	34,480

29. Selling and Administrative Expenses

(a) Other administrative expenses

Other administrative expenses for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Wages and salaries	₩	227,203	237,356
Expenses related to post-employment benefits		29,097	28,652
Other employee benefits		55,536	56,563
Travel		14,345	12,112
Depreciation		26,011	17,804
Amortization		36,833	30,527
Rental		48,316	61,933
Repairs		12,275	15,060
Advertising		66,993	88,859
Research & development		75,550	74,820
Service fees		175,181	181,104
Supplies expenses		3,654	3,207
Vehicles maintenance		6,209	5,072
Industry association fee		5,283	5,495
Training		25,010	21,966
Conference		5,576	5,866
Others		38,068	34,767
	₩	851,140	881,163

(b) Selling expenses

Selling expenses for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Freight and custody expenses	₩	133,400	123,652
Operating expenses for distribution center		8,276	9,715
Sales commissions		85,171	85,044
Sales advertising		1,258	4,738
Sales promotion		4,451	5,430
Sample		911	1,102
Sales insurance premium		6,205	4,327
	₩	239,672	234,008

30. Research and Development Expenditures Recognized as Expenses

Research and development expenditures recognized as expenses for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Selling and administrative expenses	₩	75,550	74,820
Cost of sales		383,338	410,350
	₩	458,888	485,170

31. Finance Income and Costs

Details of finance income and costs for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Finance income			
Interest income(*1)	₩	171,212	159,672
Dividend income		274,428	207,548
Gain on foreign currency transactions		270,379	174,569
Gain on foreign currency translations		20,039	20,892
Gain on valuation of derivatives		122,031	41,355
Gain on derivative transactions		805	11,420
Others		9,788	14,484
	₩	868,682	629,940
Finance costs			
Interest expenses	₩	158,810	143,233
Loss on foreign currency transactions		221,079	220,149
Loss on foreign currency translations		116,547	91,776
Loss on valuation of derivatives		8,285	-
Others		3,521	3,168
	₩	508,242	458,326

(*1) Interest income calculated using the effective interest method for the years ended December 31, 2019 and 2018 were ₩39,469 million and ₩27,769 million, respectively.

32. Other Non-Operating Income and Expenses

Details of other non-operating income and expenses for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Other non-operating income			
Gain on disposals of property, plant and equipment	₩	25,583	47,941
Gain on disposals of intangible assests		1,013	99,378
Reversal of impairment loss on investment in subsidiaries, associates and joint ventures		-	56,420
Premium income		964	11,960
Gain on disposals of assets held for sale		30,262	13
Reversal of other provisions		11,484	-
Gain on valuation of emission rights		25,440	-
Gain on disposals of emission rights		6,122	-
Others(*1,3)		137,342	90,831
	₩	238,210	306,543
Other non-operating expenses			
Loss on disposals of property, plant and equipment	₩	114,874	120,570
Impairment loss on property, plant and equipment		222,036	940,595
Impairment loss on investment in subsidiaries, associates and joint ventures		865,769	787,999
Donations		41,202	42,016
Others(*2)		109,593	164,379
	₩	1,353,474	2,055,559

(*1) During the year ended December 31, 2019, the Company recognized ₩74,044 million of refund due to the result of request for judgement on value added tax related to imported LNG as non-operating income.

(*2) During the year ended December 31, 2018, the Company recognized ₩52,997 million of additional taxes imposed on value added tax related to imported LNG as non-operating expense.

(*3) During the year ended December 31, 2018, the Company recognized ₩50,306 million of tax refund without corporate tax due to the consequences of appeal to tax tribunal against tax investigation as non-operating income.

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33. 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, 2019 and 2018 were as follows (excluding finance costs and income tax expenses):

(in millions of Won)		2019	2018
Changes in inventories(*1)	₩	139,584	(295,619)
Raw materials and consumables used		18,267,051	17,418,153
Employee benefits expenses(*3)		1,768,081	1,819,797
Outsourced processing cost		2,405,048	2,443,089
Depreciation(*2)		2,160,124	2,111,870
Amortization		77,190	69,101
Electricity and water expenses		486,347	624,819
Service fees		267,994	269,393
Rental		72,043	83,842
Advertising		66,993	88,859
Freight and custody expenses		878,683	859,092
Sales commissions		85,171	85,044
Loss on disposals of property, plant and equipment		114,874	120,570
Impairment loss on property, plant and equipment		222,036	940,595
Impairment loss on investments in subsidiaries, associates and joint ventures		865,769	787,999
Other expenses		1,263,948	1,482,328
	₩	29,140,936	28,908,932

(*1) Changes in inventories are the changes in products, semi-finished products and by-products.

(*2) Includes depreciation of investment property.

(*3) The details of employee benefits expenses for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Wages and salaries	₩	1,613,344	1,675,814
Expenses related to post-employment benefits		154,737	143,983
	₩	1,768,081	1,819,797

34. Income Taxes

(a) Income tax expense for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Current income taxes(*1)	₩	617,114	1,170,211
Deferred income taxes		10,881	(94,224)
Items credited directly to equity		27,541	86,320
Income tax expense	₩	655,536	1,162,307

(*1) Refund (additional payment) of income taxes when filing a final corporation tax return credited (charged) directly to current income taxes.

(b) The income taxes credited (charged) directly to equity for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019	2018
Changes in fair value of equity investments at fair value through other comprehensive income(*1)	₩	(5,673)	45,110
Remeasurements of defined benefit plans(*1)		30,556	40,228
Gain on divided combination		2,658	-
Gain on disposal of treasury shares		-	(50)
Loss on disposal of hybrid bond		-	678
Unappropriated retained earnings		-	354
	₩	27,541	86,320

(*1) Those amounts were recognized in other comprehensive income.

(c) The calculated income tax expense based on statutory rates compared to the actual amount of taxes recorded by the Company for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		**2019**	**2018**
Profit before income tax expense	₩	1,831,249	2,234,899
Income tax expense computed at statutory rate		493,231	604,235
Adjustments:			
Tax credit		(31,296)	(27,257)
Additional Income tax expense for prior years (refund related to prior years)		(15,320)	31,999
Tax effect from tax audit		-	91,028
Investment in subsidiaries, associates and joint ventures		237,764	233,891
Tax effect due to permanent differences		(28,843)	(14,129)
Others(*1)		-	242,540
		162,305	558,072
Income tax expense	₩	655,536	1,162,307
Effective tax rate (%)		35.8%	52.0%

(*1) Includes the effect of undeductible impairment loss related to Synthetic Natural Gas (SNG) facility for the year ended December 31, 2018.

(d) The movements in deferred tax assets (liabilities) for the years ended December 31, 2019 and 2018 were as follows:

(in millions of Won)		2019			2018		
		December 31, 2018	**Increase (decrease)**	**December 31, 2019**	**December 31, 2017**	**Increase (decrease)**	**December 31, 2018**
Deferred income tax due to temporary differences							
Reserve for special repairs	₩	(11,387)	373	(11,014)	(11,778)	391	(11,387)
Reserve for technology developments		-	-	-	(37,583)	37,583	-
PPE - Depreciation		(1,994)	7,394	5,400	(10,524)	8,530	(1,994)
Impairment loss(*1)		214,713	(86,625)	128,088	334,186	(119,473)	214,713
Prepaid expenses		17,177	(2,059)	15,118	19,950	(2,773)	17,177
PPE - Revaluation		(1,873,320)	42,527	(1,830,793)	(1,823,520)	(49,800)	(1,873,320)
Gain or loss on foreign currency translation		(24,630)	35,401	10,771	(29,227)	4,597	(24,630)
Defined benefit liabilities		(117,831)	(21,112)	(138,943)	(80,058)	(37,773)	(117,831)
Accrued revenue		(4,127)	(8,147)	(12,274)	(3,554)	(573)	(4,127)
Others(*1)		419,290	2,381	421,671	358,094	61,196	419,290
		(1,382,109)	(29,867)	(1,411,976)	(1,284,014)	(98,095)	(1,382,109)
Deferred tax from deficit and tax credit							
Deficit carried over		14,369	(2,746)	11,623	28,200	(13,831)	14,369
Tax credit carry-forward		-	-	-	-	-	-
		14,369	(2,746)	11,623	28,200	(13,831)	14,369
Deferred income taxes recognized directly to equity							
Net changes in fair value of equity investments at fair value through other comprehensive income(*1)		78,590	(8,824)	69,766	(87,332)	165,922	78,590
Remeasurements of defined benefit plans		109,478	30,556	140,034	69,250	40,228	109,478
		188,068	21,732	209,800	(18,082)	206,150	188,068
	₩	(1,179,672)	(10,881)	(1,190,553)	(1,273,896)	94,224	(1,179,672)

(*1) These changes includes the cumulative impact of initial application of K-IFRS No. 1115 and K-IFRS No. 1109 for the year ended December 31, 2018.

(e) Deferred tax assets (liabilities) as of December 31, 2019 and 2018 are as follows:

(in millions of Won)		2019			2018		
		Assets	**Liabilities**	**Net**	**Assets**	**Liabilities**	**Net**
Deferred income tax due to temporary differences							
Reserve for special repairs	₩	-	(11,014)	(11,014)	-	(11,387)	(11,387)
PPE - Depreciation		17,946	(12,546)	5,400	19,114	(21,108)	(1,994)
Impairment loss		128,088	-	128,088	214,713	-	214,713
Prepaid expenses		15,118	-	15,118	17,177	-	17,177
PPE - Revaluation		-	(1,830,793)	(1,830,793)	-	(1,873,320)	(1,873,320)
Gain or loss on foreign currency translation		135,515	(124,744)	10,771	120,861	(145,491)	(24,630)
Defined benefit liabilities		227,229	(366,172)	(138,943)	229,983	(347,814)	(117,831)
Accrued revenue		-	(12,274)	(12,274)	-	(4,127)	(4,127)
Others		482,662	(60,991)	421,671	459,908	(40,618)	419,290
		1,006,558	(2,418,534)	(1,411,976)	1,061,756	(2,443,865)	(1,382,109)
Deferred tax from deficit and tax credit							
Deficit carried over		11,623	-	11,623	14,369	-	14,369
Deferred income taxes recognized directly to equity							
Net changes in fair value of equity investments at fair value through other comprehensive income		158,817	(89,051)	69,766	167,795	(89,205)	78,590
Remeasurements of defined benefit plans		140,034	-	140,034	109,478	-	109,478
		298,851	(89,051)	209,800	277,273	(89,205)	188,068
	₩	1,317,032	(2,507,585)	(1,190,553)	1,353,398	(2,533,070)	(1,179,672)

(f) The Company believes that its accruals for tax liabilities are adequate for all open tax years based on its assessment of many factors, including interpretations of tax law and prior year.

35. Earnings per Share

Basic and diluted earnings per share for the years ended December 31, 2019 and 2018 were as follows:

(in Won, except per share information)		2019	2018
Profit for the period	₩	1,175,712,402,299	1,072,591,562,885
Interests of hybrid bonds, net of tax		(6,669,999,999)	(17,720,986,299)
Weighted-average number of common shares outstanding(*1)		80,113,759	80,000,606
Basic and diluted earnings per share	₩	14,592	13,186

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

(in share)	2019	2018
Total number of common shares issued	87,186,835	87,186,835
Weighted-average number of treasury shares	(7,073,076)	(7,186,229)
Weighted-average number of common shares outstanding	80,113,759	80,000,606

Since there were no potential shares of common stock which had dilutive effects as of December 31, 2019 and 2018, diluted earnings per share is equal to basic earnings per share.

36. Related Party Transactions

(a) Significant transactions with related companies for the years ended December 31, 2019 and 2018 were as follows:

1) For the year ended December 31, 2019

(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. ₩	6,688	11,137	4,725	416,734	57	24,174
POSCO COATED & COLOR STEEL Co., Ltd.	468,070	2,014	95	-	20,298	724
POSCO ICT(*4)	2,924	4,994	-	344,977	34,638	181,128
eNtoB Corporation	15	60	304,846	64,845	126	25,754
POSCO CHEMICAL CO., LTD (Formerly, POSCO CHEMTECH)	389,731	35,592	522,493	17,549	315,530	4,561
POSCO ENERGY CO., LTD.	148,205	2,211	5,123	94	-	7,561
POSCO INTERNATIONAL Corporation (Formerly, POSCO DAEWOO Corporation)	6,025,938	46,661	541,002	-	49,506	7,149
POSCO Thainox Public Company Limited	265,374	13,795	10,037	-	-	3
POSCO America Corporation	300,598	-	-	-	-	2,994
POSCO Canada Ltd.	1,067	1,833	306,552	-	-	-
POSCO Asia Co., Ltd.	1,781,841	1,352	390,056	1,338	1,574	7,561
Qingdao Pohang Stainless Steel Co., Ltd.	146,468	-	-	-	-	110
POSCO JAPAN Co., Ltd.	1,509,631	36	38,631	6,269	-	5,835
POSCO-VIETNAM Co., Ltd.	265,849	368	-	-	-	66
POSCO MEXICO S.A. DE C.V.	303,924	159	-	-	-	809
POSCO Maharashtra Steel Private Limited	644,652	311	-	-	-	800
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	121,633	27	2,189	-	-	-
POSCO VST CO., LTD.	299,307	-	-	-	-	114
POSCO INTERNATIONAL SINGAPORE PTE LTD.	-	154	694,600	-	-	-
Others	964,532	20,679	134,296	34,444	246,184	169,849
	13,646,447	141,383	2,954,645	886,250	667,913	439,192
Associates and joint ventures(*3)						
POSCO PLANTEC Co., Ltd.	1,364	86	2,882	306,927	15,089	30,317
SNNC	5,527	4,100	588,276	-	-	9
POSCO-SAMSUNG-Slovakia Processing Center	65,688	-	-	-	-	-
Roy Hill Holdings Pty Ltd	-	-	1,237,168	-	-	-
Others	16,084	112,390	76,427	-	-	85,167
	88,663	116,576	1,904,753	306,927	15,089	115,493
₩	13,735,110	257,959	4,859,398	1,193,177	683,002	554,685

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

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

(*3) As of December 31, 2019, 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.

2) For the year ended December 31, 2018

(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. ₩	7,827	97	-	322,924	47	36,428
POSCO COATED & COLOR STEEL Co., Ltd.	476,105	2,725	-	-	9,211	1,434
POSCO ICT	2,624	7,479	-	341,472	34,376	196,252
eNtoB Corporation	12	60	377,198	27,508	390	31,455
POSCO CHEMICAL CO., LTD (Formerly, POSCO CHEMTECH)	417,957	35,762	531,452	21,730	319,868	2,802
POSCO ENERGY CO., LTD.	206,638	1,445	-	-	-	-
POSCO INTERNATIONAL Corporation (Formerly, POSCO DAEWOO Corporation)	5,835,226	42,888	690,345	-	57,624	4,318
POSCO Thainox Public Company Limited	299,450	5,335	10,115	-	-	71
POSCO America Corporation	336,366	-	-	-	-	2,486
POSCO Canada Ltd.	-	2,155	300,982	-	-	-
POSCO Asia Co., Ltd.	1,857,665	253	536,280	650	2,449	6,524
Qingdao Pohang Stainless Steel Co., Ltd.	188,252	7	-	-	-	34
POSCO JAPAN Co., Ltd.	1,353,313	6	25,773	4,204	-	5,411
POSCO VIETNAM CO., Ltd.	273,573	156	-	-	-	8
POSCO MEXICO S.A. DE C.V.	299,276	17	-	-	-	35
POSCO Maharashtra Steel Private Limited	563,618	584	-	-	-	156
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	196,095	-	2,616	-	-	5
POSCO VST CO., LTD.	289,072	-	-	-	-	-
POSCO INTERNATIONAL SINGAPORE PTE LTD.	-	154	267,545	-	-	-
Others	869,050	43,944	189,259	31,787	264,060	140,869
	13,472,119	143,067	2,931,565	750,275	688,025	428,288
Associates and joint ventures						
POSCO PLANTEC Co., Ltd.	10,904	240	3,166	215,023	24,192	10,257
SNNC	5,105	4,108	558,425	-	-	80
POSCO-SAMSUNG-Slovakia Processing Center	61,981	-	-	-	-	-
Roy Hill Holdings Pty Ltd	-	-	810,196	-	-	-
Others	14,199	54,747	64,335	-	-	6
	92,189	59,095	1,436,122	215,023	24,192	10,343
₩	13,564,308	202,162	4,367,687	965,298	712,217	438,631

(b) The related account balances of significant transactions with related companies as of December 31, 2019 and 2018 are as follows:

1) December 31, 2019

(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.	₩ 5,702	65	5,767	-	78,512	385	78,897
POSCO COATED & COLOR STEEL Co., Ltd.	57,792	-	57,792	-	11	3,828	3,839
POSCO ICT	225	1	226	1,147	129,424	42,844	173,415
eNtoB Corporation	-	-	-	3,459	27,431	-	30,890
POSCO CHEMICAL CO., LTD (Formerly, POSCO CHEMTECH)	35,102	3,578	38,680	17,839	52,710	19,369	89,918
POSCO ENERGY CO., LTD.	1,876	4	1,880	-	3,229	14,912	18,141
POSCO INTERNATIONAL Corporation (Formerly, POSCO DAEWOO Corporation)	633,073	-	633,073	345	2,218	3,839	6,402
POSCO Thainox Public Company Limited	52,826	2	52,828	916	-	-	916
POSCO America Corporation	8,448	-	8,448	-	-	-	-
POSCO Asia Co., Ltd.	508,962	748	509,710	12,784	171	-	12,955
Qingdao Pohang Stainless Steel Co., Ltd.	29,842	-	29,842	-	-	-	-
POSCO MEXICO S.A. DE C.V.	90,351	702	91,053	-	-	-	-
POSCO Maharashtra Steel Private Limited	235,917	444	236,361	-	-	-	-
Others(*1)	470,734	33,851	504,585	14,397	40,233	87,652	142,282
	2,130,850	39,395	2,170,245	50,887	333,939	172,829	557,655
Associates and jointventures							
POSCO PLANTEC Co., Ltd.	84	10	94	471	49,511	-	49,982
SNNC	297	65	362	19,769	-	-	19,769
Roy Hill Holdings Pty Ltd	-	-	-	93,383	-	-	93,383
Others	942	706	1,648	3,447	586	-	4,033
	1,323	781	2,104	117,070	50,097	-	167,167
	₩ 2,132,173	40,176	2,172,349	167,957	384,036	172,829	724,822

(*1) During the December 31, 2018, the Company made loans of ₩2,950 million to Suncheon Eco Trans Co., Ltd., a subsidiary of the Company. As of December 31, 2019, corresponding amounts of those loans were recorded as allowance for doubtful accounts.

2) December 31, 2018

(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.	₩ 57	5,181	5,238	-	52,775	438	53,213
POSCO COATED & COLOR STEEL Co., Ltd.	55,598	317	55,915	-	25	1,194	1,219
POSCO ICT	-	229	229	1,572	112,960	8,717	123,249
eNtoB Corporation	-	-	-	10,860	22,072	11	32,943
POSCO CHEMICAL CO., LTD (Formerly, POSCO CHEMTECH)	40,258	3,883	44,141	19,911	58,725	19,012	97,648
POSCO ENERGY CO., LTD.	22,163	1,700	23,863	-	-	1,425	1,425
POSCO INTERNATIONAL Corporation (Formerly, POSCO DAEWOO Corporation)	437,554	1,056	438,610	161	1,881	5,304	7,346
POSCO Thainox Public Company Limited	71,189	-	71,189	467	71	-	538
POSCO America Corporation	14,338	-	14,338	-	221	-	221
POSCO Asia Co., Ltd.	480,205	1,047	481,252	7,839	-	-	7,839
Qingdao Pohang Stainless Steel Co., Ltd.	52,037	-	52,037	-	-	-	-
POSCO MEXICO S.A. DE C.V.	101,179	218	101,397	-	-	-	-
POSCO Maharashtra Steel Private Limited	390,413	1,428	391,841	-	-	-	-
Others	379,950	54,407	434,357	33,183	36,591	85,745	155,519
	2,044,941	69,466	2,114,407	73,993	285,321	121,846	481,160
Associates and jointventures							
POSCO PLANTEC Co., Ltd.	249	10	259	3,275	34,803	-	38,078
SNNC	541	61	602	22,188	-	-	22,188
Roy Hill Holdings Pty Ltd	-	-	-	22,997	-	-	22,997
Others	918	910	1,828	217	76	-	293
	1,708	981	2,689	48,677	34,879	-	83,556
	₩ 2,046,649	70,447	2,117,096	122,670	320,200	121,846	564,716

(c) For the years ended December 31, 2019 and 2018, details of compensation to key management officers were as follows:

(in millions of Won)		2019	2018
Short-term benefits	₩	47,813	44,931
Long-term benefits		5,952	6,485
Retirement benefits		12,025	12,308
	₩	65,790	63,724

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

37. 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 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).

The 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.

The 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 provisions, 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 obligation.

(b) Commitments

1) The Company 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, 2019, 102 million tons of iron ore and 11 million tons of coal remained to be purchased under such long-term contracts.

2) The Company 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.

3) The Company entered into consecutive voyage charter (CVC) contract for the transportation of raw materials. As of December 31, 2019, there are 39 vessels under contract and the average remaining contract period is about 10 years.

4) As of December 31, 2019, the Company entered into commitments with KOREA ENERGY AGENCY for long-term foreign currency borrowing, which is limited up to the amount of USD 4.12 million. The borrowing is related to the exploration of gas hydrates in Western Fergana-Chinabad. The repayment of the borrowing depends on the success of the project. The Company is not liable for the repayment of full or part of the money borrowed if the respective project 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, 2019, the ending balance of the borrowing amounts to USD 1.02 million.

5) The Company has provided a supplemental funding agreement, as the largest shareholder, as requested from the creditors, including Norddeutsche Landesbank, for seamless funding to the construction of new power plant by POSCO ENERGY CO., LTD.

6) 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.

(c) As of December 31, 2019, the Company has provided three blank checks to KOREA ENERGY AGENCY as collateral for long-term foreign currency borrowings.

(d) Litigation in progress

The Company is involved in 25 lawsuits, claim for employee right aggregating to ₩39.2 billion as defendant as of December 31, 2019, which arise from the ordinary course of business. The Company has recognized provisions amounting to ₩2.1 billion for one of 25 lawsuits based on its reliable estimate of outflow of resources. However, the Company has not recognized any provisions for the other lawsuits and claims since the Company does not believe it has a present obligation as of December 31, 2019.

38. Statements of Cash Flows

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

(in millions of Won)		2019	2018
Trade accounts and notes receivable, net	₩	1,112	(102,920)
Other accounts receivable		(91,374)	14,700
Inventories		274,674	(745,730)
Prepaid expenses		(2,389)	1,710
Other current assets		(1,310)	3,103
Long-term guarantee deposits		(594)	(22)
Other non-current assets		1,498	751
Trade accounts and notes payable		(457,490)	84,883
Other accounts payable		5,570	103,295
Accrued expenses		(18,025)	46,550
Advances received		(1,594)	(2,210)
Withholdings		81,319	(3,108)
Unearned revenue		(5,592)	4,270
Other current liabilities		(23,755)	47,670
Derivative liabilities		-	(9,632)
Payments of severance benefits		(84,568)	(121,100)
Plan assets		(92,083)	(135,639)
Other non-current liabilities		(23,440)	-
	₩	(438,041)	(813,429)

(b) Changes in liabilities arising from financial activities for the years ended December 31, 2019 and 2018 were as follows:

1) December 31, 2019

(in millions of Won)

		Liabilities					
		Short-term borrowings	long-term borrowings	Dividend payable	Lease liabilities	Long-term financial liabilities	Derivatives that hedge long-term borrowings
Beginning	₩	476,612	3,794,358	2,764	141,761	10,985	33,478
Changes from financing cash flows		(309,029)	2,299,693	(890,369)	(39,194)	1,700	9,683
The effect of changes in foreign exchange rates		(562)	71,370	-	168	-	-
Changes in fair values		-	-	-	-	-	(114,551)
Other changes:							-
Decrease in retained earnings		-	-	889,900	-	-	-
Amortization of discount on debentures issued		-	5,570	-	-	-	-
Initial application of K-IFRS No.1116		-	-	-	128,610	-	-
Increase in lease assets		-	-	-	25,626	-	-
Increase due to business combination		-	-	1	-	-	-
Ending	₩	167,021	6,170,991	2,296	256,971	12,685	(71,390)

2) December 31, 2018

(in millions of Won)

		Liabilities					
		Short-term borrowings	long-term borrowings	Dividend payable	Lease liabilities	Long-term financial liabilities	Derivatives that hedge long-term borrowings
Beginning	₩	383,976	3,517,248	4,671	71,503	14,874	84,466
Changes from financing cash flows		92,744	198,250	(706,351)	(11,048)	(3,889)	-
The effect of changes in foreign exchange rates		(108)	77,409	-	258	-	-
Changes in fair values		-	-	-	-	-	(50,988)
Other changes:		-	-				
Decrease in retained earnings		-	-	704,444	-	-	-
Amortization of discount on debentures issued		-	1,451	-	-	-	-
Increase in finance lease assets		-	-	-	81,048	-	-
Ending	₩	476,612	3,794,358	2,764	141,761	10,985	33,478

39. Business Combination

(a) The company merged with POSCO Processing & Service and Off-gas Power Station Business Sector of POSCO ENERGY CO., Ltd. for the year period ended December 31, 2019. The purpose of the business combination is to promote management efficiency and to enhance shareholder value based on synergy between businesses.

	POSCO Processing & Service	POSCO ENERGY CO., Ltd. Off-gas Power Station Business Sector
Decision date of Board of Directors	2018-11-03	2019-04-12
Acquisition date	2019-01-01	2019-09-01

(b) Since the merger between the controlling company and its subsidiaries, the assets acquired and liabilities assumed through the merger are measured at book value in the consolidated financial statements of the Company. The difference between considerations transferred and the book value of net assets recognized is reflected in capital surplus.

(in millions of Won)		POSCO Processing & Service	POSCO ENERGY CO., Ltd. Off-gas Power Station Business Sector
Transfer price			
Book value of existing ownership interest		385,995	-
Treasury shares		37,001	-
Cash		36	1,156,953
	₩	423,032	1,156,953
Identifiable assets, acquired liabilities			
Cash and cash equivalents		2,207	-
Trade accounts and note receivable		-	37,779
Other financial assets		39,670	-
Inventories		-	6,585
Investment property		41,220	-
Property, plant, equipment and intangible assets		-	804,706
Investments in Subsidiaries, Associates and Joint ventures		740,211	-
Other assets		9,962	2,418
Trade accounts and note payable		-	(19,941)
Other liabilites		(1,748)	(874)
Total identifiable net assets	₩	831,522	830,673
Capital surplus arising from business combination			
Decrease in capital surplus	₩	408,490	(326,280)

40. Events after the Reporting Period

On January 17, 2020, the Company issued non-guaranteed senior dollar bonds (issued at USD 500 million and USD 440 million) and non-guaranteed senior euro bonds (issued at EUR 500 million). The maturity of the bonds is January 17, 2023, January 17, 2025, and January 17, 2024.

Notice to Readers

This report is annexed in relation to the audit of the separate financial statements as of December 31, 2019 and the audit of internal accounting control system pursuant to Article 8-7 of the Act on External Audit for Joint-stock Companies of the Republic of Korea.

<u>Independent Auditors' Report on Internal Control over Financial Reporting</u>

<u>English Translation of a Report Originally Issued in Korean</u>

To the Shareholders and Board of Directors of
POSCO:

Opinion on Internal Control over Financial Reporting
We have audited POSCO's (the Company) internal control over financial reporting ("ICFR") as of December 31, 2019 based on the criteria established in the Conceptual Framework for Designing and Operating ICFR ("ICFR Design and Operation Framework") issued by the Operating Committee of Internal Control over Financial Reporting in the Republic of Korea (the "ICFR Committee").

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on ICFR Design and Operation Framework.

We also have audited, in accordance with Korean Standards on Auditing (KSAs), the separate financial statements of the Company, which comprise the separate statement of financial position as of December 31, 2019, the separate statements of comprehensive income , changes in equity and cash flows for the year then ended, and notes, comprising significant accounting policies and other explanatory information, and our report dated March 12, 2020 expressed an unmodified opinion on those separate financial statements.

Basis for Opinion
We conducted our audit in accordance with KSAs. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Internal Control over Financial Reporting section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the internal control over financial reporting in Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Internal Control over Financial Reporting
The Company's management is responsible for designing, operating and maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Report on Operating Status of Internal Control over Financial Reporting.

Those charged with governance are responsible for overseeing the Company's internal control over financial reporting.

Auditors' Responsibilities for the Audit of the Internal Control over Financial Reporting
Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We conducted our audit in accordance with KSAs. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk.

Definition and Limitations of Internal Control over Financial Reporting
A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with Korean International Financial Reporting Standards ("K-IFRS"). A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with K-IFRS, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The engagement partner on the audit resulting in this independent auditors' report is Choi, Se Hong.

KPMG Samjong Accounting Corp.

Seoul, Korea
March 12, 2020

This report is effective as of March 12, 2020, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the internal control over financial reporting. 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.

Report on Operating Status of Internal Control over Financial Reporting

English Translation of a Report Originally Issued in Korean

To the Shareholders, Board of Directors and Audit Committee of POSCO

We, as the Chief Executive Officer and the Internal Control Officer of the Company, assessed operating status of the Company's Internal Control over Financial Reporting("ICFR") for the year ending December 31, 2019.

Design and operation of ICFR is the responsibility of the Company's management, including the Chief Executive Officer and the Internal Control Officer (collectively, "We").

We evaluated whether the Company effectively designed and operated its ICFR to prevent and detect errors or frauds which may cause a misstatement in financial statements to ensure preparation and disclosure of reliable financial information.

We used the'Guidelines for Internal Control over Financial Reporting'for evaluating design and operation of the Company's ICFR, established by the Operating Committee of Internal Control over Financial Reporting in Korea (the"ICFR Committee").

Based on our assessment, we concluded that the Company's ICFR is designed and operated effectively as of December 31, 2019, in all material respects, in accordance with the'Guidelines for Internal Control over Financial Reporting'.

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

January 31, 2020

Choi, Jeong-Woo, Chief Executive Officer

Chon, Jung-Son, Internal Control Officer