POSCO HOLDINGS INC. (Formerly, POSCO)

Separate Financial Statements December 31, 2021 and 2020

(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 HOLDINGS INC. (formerly, POSCO):

Opinion

We have audited the separate financial statements of POSCO HOLDINGS INC. (formerly, POSCO, the "Company"), which comprise the separate statements of financial position as of December 31, 2021 and 2020, 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, 2021 and 2020, 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, 2021 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 10, 2022 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.

Emphasis of matter

We draw attention to Note 1 and Note 39 to the separate financial statements, which describes the spin-off by the former POSCO, the controlling company on March 1, 2022. Upon completion of the spin-off, the surviving company was renamed as POSCO HOLDINGS INC., and a new subsidiary, POSCO, was established. Our opinion is not modified in respect of this matter.

Key Audit Matters

The key audit matter communicated below is a matter that, in our professional judgment, was of most significance in our audit of the separate financial statements as of and for the year ended December 31, 2021. This matter was 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 this matter.

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

As described in notes 3(14), 11 and 32 to the separate financial statements, the carrying amount of investments in subsidiaries, associates and joint ventures is W16,002,640 million as of December 31, 2021. The Company recognized impairment loss on investments in subsidiaries, associates and joint ventures of W208,732 million during the year ended December 31, 2021.

The Company identifies whether there is any indication for impairment at the end of each reporting period and performs impairment test over investments in subsidiaries, associates and joint ventures when impairment indicator exists. The Company measures the impairment loss as the difference between the recoverable amount and the carrying amount, if the carrying amount exceeds the recoverable amount. 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 estimated sales, discount rate and terminal growth rate have significant impacts on the estimated value-in-use. Considering significant degree of management's judgments required in estimating value-in-use and likelihood of existence 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:

- Testing certain internal controls over the Company's impairment assessment process of investments in subsidiaries, associates and joint ventures;
- Assessing whether the impairment tests have been completely performed on investments of which indication of impairment exists;
- Evaluating the key assumptions (including estimated sales) used to determine the valuein-use by comparison with the latest financial budgets approved by the Board of Directors, historical performance and industry reports;

- Comparing the estimated sales prepared in prior year with the current year's performance to assess the Company's ability to accurately forecast;
- Assessing the terminal growth rates by comparison with observable market information;
- Performing sensitivity analysis on the discount rates and terminal growth rates applied to assess the impact of changes in these key assumptions on the results of management's impairment assessments; and,
- Engaging our valuation specialists to assist us in evaluating the discount rates used in the valuation by comparing it against discount rates that were independently developed using observable information.

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.

(CPMG Samjung Accounting Corp.

Seoul, Korea March 10, 2022

This report is effective as of March 10, 2022, 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 HOLDINGS INC. (formerly, POSCO) Separate Statements of Financial Position As of December 31, 2021 and 2020

(in millions of Won)	Notes		December 31, 2021	December 31, 2020
Assets				
Cash and cash equivalents	4,5,22	₩	2,042,274	1,822,660
Trade accounts and notes receivable, net	6,22,36		6,017,508	3,693,535
Other receivables, net	7,22,36		545,341	279,555
Other short-term financial assets	8,22		9,605,522	9,607,632
Inventories	9,33		7,623,202	4,093,829
Assets held for sale	10		29,789	32,244
Other current assets	15		55,244	50,498
Total current assets		_	25,918,880	19,579,953
Long-term trade accounts and notes receivable, net	6,22		5,675	2,456
Other receivables, net	7,22		274,253	84,037
Other long-term financial assets	8,22		1,326,565	1,072,817
Investments in subsidiaries, associates				
and joint ventures	11,32		16,002,640	14,883,152
Investment property, net	12		144,140	149,617
Property, plant and equipment, net	13,32		19,772,299	20,216,932
Intangible assets, net	14		551,410	621,926
Defined benefit assets, net	20		212,531	76,501
Other non-current assets	15		34,366	107,578
Total non-current assets		_	38,323,879	37,215,016
Total assets		₩	64,242,759	56,794,969

POSCO HOLDINGS INC. (formerly, POSCO) Separate Statements of Financial Position, Continued As of December 31, 2021 and 2020

(in millions of Won)	Notes		December 31, 2021	December 31, 2020
Liabilities		_		
Trade accounts and notes payable Short-term borrowings	22,36	₩	2,453,068	1,258,470
and current installments of long-term borrowings	4,16,22,38		2,072,354	2,408,392
Other payables	17,22,36,38		1,267,459	1,127,323
Other short-term financial liabilities	18,22,38		13,755	12,788
Current income tax liabilities	34		1,832,078	137,858
Liabilities directly associated with the assets held fo	r 10		185	-
Provisions	19		84,409	63,604
Other current liabilities	21		144,961	80,676
Total current liabilities			7,868,269	5,089,111
Long-term borrowings,				
excluding current installments	4,16,22,38		6,129,778	5,346,944
Other payables	17,22,38		399,144	220,612
Other long-term financial liabilities	18,22,38		21,991	122,154
Deferred tax liabilities	34		747,653	848,317
Long-term provisions	19		36,755	52,602
Other non-current liabilities	21	_	3,744	525
Total non-current liabilities		_	7,339,065	6,591,154
Total liabilities			15,207,334	11,680,265
Equity		_		
Share capital	23		482,403	482,403
Capital surplus	23		1,339,289	1,339,289
Hybrid bonds	24		199,384	199,384
Reserves	25		(211,849)	(296,626)
Treasury shares	26		(2,508,294)	(2,391,523)
Retained earnings	27	_	49,734,492	45,781,777
Total equity		_	49,035,425	45,114,704
Total liabilities and equity		₩	64,242,759	56,794,969

POSCO HOLDINGS INC. (Formerly, POSCO) Separate Statements of Comprehensive Income For the years ended December 31, 2021 and 2020

in millions of Won, except per share informations)	Notes		2021	2020
Revenue	28,36	₩	39,920,201	26,509,920
Cost of sales	9,20,30,33,36	3 _	(32,136,439)	(24,323,352
Gross profit			7,783,762	2,186,568
Selling and administrative expenses				
Impairment loss on				
trade accounts and notes receivable	22,33		(10)	(4,372
Other administrative expenses	20,29,30,33		(911,841)	(807,626
Selling expenses	29,33	_	(222,311)	(239,373
Operating profit			6,649,600	1,135,197
Finance income and costs				
Finance income	22,31		1,694,175	1,230,684
Finance costs	22,31		(925,649)	(820,201
Other non-operating income and expenses				
Reversal of (impairment loss) on other receivables	22,33		(363)	487
Other non-operating income	32		227,008	146,548
Other non-operating expenses	32,33	_	(661,071)	(674,835
Profit before income tax			6,983,700	1,017,880
ncome tax expense	34	_	(1,802,473)	(52,017
Profit			5,181,227	965,863
Other comprehensive income (loss) Items that will not be reclassified subsequently to profit or loss:				
Remeasurements of defined benefit plans Net changes in fair value of equity investments	20		32,426	53,816
at fair value through other comprehensive income	8,22,25		83,110	(115,599
Fotal comprehensive income		₩_	5,296,763	904,080
Earnings per share (in Won)	35			
Basic earnings per share (in Won)			68,360	12,123
Diluted earnings per share (in Won)		W	66,651	12,123

POSCO HOLDINGS INC. (formerly, POSCO) Separate Statements of Changes in Equity For the years ended December 31, 2021 and 2020

(in millions of Won)		Share capital	Capital surplus	H ybrid bonds	Reserves	Treasury shares	Retained earnings	Total
Balance as of January 1, 2020	₩	482,403	1,252,220	199,384	(183,930)	(1,508,303)	45,372,411	45,614,185
Comprehensive income:								
Profit		-	-	-	-	-	965,863	965,863
Other comprehensive income (loss)								
Remeasurements of defined benefit plans, net of tax		-	-	-	-	-	53,816	53,816
Net changes in fair value of equity investments								
at fair value through other comprehensive income, net of tax		-	-	-	(112,696)	-	(2,903)	(115,599)
Transactions with owners of the Company,					(112,000)		(2,000)	(110,000)
recognized directly in equity:								
Year-end dividends		-	-	-	-	-	(320,462)	(320,462)
Interim dividends		-	-	-	-	-	(277,723)	(277,723)
Interest of hybrid bonds		-	-	-	-	-	(9,225)	(9,225)
Acquisition of treasury shares		-	-	-	-	(883,220)	-	(883,220)
Others		-	87,069	-		-	-	87,069
Balance as of December 31, 2020	₩_	482,403	1,339,289	199,384	(296,626)	(2,391,523)	45,781,777	45,114,704
Balance as of January 1, 2021	₩	482,403	1,339,289	199,384	(296,626)	(2,391,523)	45,781,777	45,114,704
Comprehensive income:		- ,	,,		, ,	()	-, -,	-, , -
Profit		-	-	-	-	-	5,181,227	5,181,227
Other comprehensive income (loss)								
Remeasurements of defined benefit plans, net of tax		-	-	-	-	-	32,426	32,426
Net changes in fair value of equity investments								
at fair value through other comprehensive income, net of tax		-	-	-	84,777	-	(1,667)	83,110
Transactions with owners of the Company,								
recognized directly in equity:								
Year-end dividends		-	-	-	-	-	(342,564)	(342,564)
Interim dividends		-	-	-	-	-	(907,507)	(907,507)
Interest of hybrid bonds		-	-	-	-	-	(9,200)	(9,200)
Acquisition of treasury shares	_		-	-		(116,771)		(116,771)
Balance as of December 31, 2021	₩_	482,403	1,339,289	199,384	(211,849)	(2,508,294)	49,734,492	49,035,425

POSCO HOLDINGS INC. (formerly, POSCO) Separate Statements of Cash Flows For the years ended December 31, 2021 and 2020

(in millions of Won)

	Notes	2021	2020
Cash flows from operating activities			
Profit	₩	5,181,227	965,863
Adjustments for :			
Expenses related to post-employment benefit		121,059	126,191
Depreciation		2,289,507	2,273,633
Amortization		107,465	106,926
Impairment loss on trade and other receivables		373	3,885
Finance income		(1,276,011)	(779,150)
Finance costs		514,904	457,851
Loss on valuation of inventories		4,854	4,735
Gain on disposal of property, plant and equipment		(30,359)	(12,340)
Loss on disposal of property, plant and equipment		111,955	181,454
Impairment loss on property, plant and equipment		228,171	27,846
Impairment loss on intangible assets		7,180	-
Gain on disposal of investments in subsidiaries,			
associates and joint ventures		(56,121)	(24,334)
Impariment loss on investments in subsidiaries,			
associates and joint ventures		208,732	360,894
Gain on disposal of assets held for sale		(48,018)	(22,734)
Loss on disposal of assets held for sale		-	5,383
Impairment loss on assets held for sale		-	9,093
Gain on disposal of emission rights		-	(24,566)
Loss on disposal of emission rights		5,843	-
Increase to provisions		42,655	73,037
Income tax expense		1,802,473	52,017
Others		16,436	9,536
Changes in operating assets and liabilities	38	(4,980,364)	1,550,039
Interest received		144,368	197,306
Interest paid		(180,743)	(230,537)
Dividends received		716,640	232,492
Income taxes paid		(151,888)	(386,850)
Net cash provided by operating activities	₩	4,780,338	5,157,670

POSCO HOLDINGS INC. (formerly, POSCO) Separate Statements of Cash Flows, Continued For the years ended December 31, 2021 and 2020

(in millions of Won)	Notes		2021	2020
Cash flows from investing activities				
Decrease in deposits		₩	2,464,819	3,336,891
Proceeds from disposal of short-term financial instruments			35,801,788	36,302,634
Proceeds from disposal of long-term financial instruments			6	-
Collection of short-term loans			7,430	2,709
Proceeds from disposal of debt securities			150,070	360,109
Proceeds from disposal of long-term debt securities			1,739	-
Proceeds from disposal of equity securities			14,066	7,937
Proceeds from disposal of other securities			6,049	8,183
Proceeds from disposal of derivatives			1,482	-
Proceeds from disposal of investments in subsidiaries,				
associates and joint ventures			3,896	24,247
Proceeds from disposal of intangible assets			727	1,047
Proceeds from disposal of assets held for sale			67,264	225,292
Proceeds from disposal of emission rights			5,503	66,143
Increase in deposits			(2,563,854)	(3,380,247)
Acquisition of short-term financial instruments			(35,426,439)	(38,160,724)
Acquisition of long-term financial instruments			(272,824)	-
Increase in long-term loans			(196,101)	(21,923)
Acquisition of debt securities			(150,033)	(220,110)
Acquisition of other securities			(44,867)	(20,795)
Acquisition of investments in subsidiaries,			(1 206 424)	(226,226)
associates and joint ventures Acquisition of property, plant and equipment			(1,206,424) (1,968,289)	(236,226) (2,450,816)
Payment for disposal of property, plant and equipment			(1,908,289) (59,806)	(102,354)
Acquisition of intangible assets			(49,478)	(102,334)
Net cash used in investing activities		₩	(3,413,276)	(4,359,430)
Cash flows from financing activities				
Proceeds from borrowings			5,553,432	3,566,518
Increase in long-term financial liabilities			1,396	537
Proceeds from (payment for) disposals of derivatives			(9,103)	5,873
Receipt of government grants			431	954
Repayment of borrowings			(5,272,719)	(1,941,838)
Decrease in long-term financial liabilities			(1,318)	(974)
Repayment of lease liabilities			(46,756)	(63,684)
Payment of cash dividends			(1,248,689)	(598,627)
Acquisition of treasury shares			(116,771)	(883,220)
Payment of interest of hybrid bonds			(9,200)	(9,225)
Net cash provided by (used in) financing activities	38	₩	(1,149,297)	76,314
Effect of exchange rate fluctuation on cash held			1,849	(30,033)
Net increase in cash and cash equivalents			219,614	844,521
Cash and cash equivalents at beginning of the period	5		1,822,660	978,139
Cash and cash equivalents at end of the period	5	₩_	2,042,274	1,822,660

1.Reporting Entity

POSCO HOLDINGS INC. (formerly, 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 five of its overseas liaison offices.

The Company established a new subsidiary, POSCO, by a vertical spin-off of its steel business on March 1, 2022, and changed the name of the surviving company to POSCO HOLDINGS INC..

As of December 31, 2021, major shareholders are as follows:

Shareholder's name	Number of shares	Ownership (%)
National Pension Service	8,063,521	9.25
BlackRock Fund Advisors(*1)	4,312,713	4.95
Nippon Steel Corporation	2,894,712	3.32
The Government of Singapore	2,889,467	3.31
Samsung group(*1)	1,325,407	1.52
Others	67,701,015	77.65
	87,186,835	100.00

(*1) Includes shares held by subsidiaries and others.

As of December 31, 2021, 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 28, 2022, and will be submitted for approval at the shareholders' meeting to be held on March 18, 2022.

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

(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 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

Except for the standards and amendments applied for the first time for the reporting period beginning on January 1, 2021 described below, the accounting policies applied by the Company in these separate financial statements are the same as those applied by the Company in its financial statements as of and for the year ended December 31, 2020.

The Company has applied 'Phase 2 Interest Rate Benchmark Reform'(K-IFRS No. 1109 "Financial Instruments", K-IFRS No. 1039 "Financial Instruments: Recognition and Measurement", K-IFRS No. 1107 "Financial Instruments : Disclosures", K-IFRS No. 1116 "Lease") for the first time for the reporting period commenced January 1, 2021. The Company believes that the effect of the other standards and amendments applied for the first time for the reporting period Lanuary 1, 2021 is not significant.

In relation to 'Phase 2 Interest Rate Benchmark Reform', the amendments provide practical expedients to account for modification in financial instruments, lease and hedging relationship.

Information about the accounting policy is included in the note 3(f) to the separate financial statements.

The Company believes that the effect of the amendments to the financial statements is not significant.

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 of the original transaction.

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 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, 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

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.

(e) Derecognition of financial assets

Financial assets are derecognized when the rights to receive cash flows from the financial assets have expired or have been transferred and the Company has transferred substantially all the risks and rewards of ownership. If a transfer does not result in derecognition because the Company has retained substantially all the risks and rewards of ownership of the transferred asset, the Company continues to recognize the transferred asset in its entirety and recognizes a financial liability for the consideration received.

(f) Interest rate benchmark reform

The Company reflects the changes in the basis for determining contractual cash flows of financial assets and financial liabilities as a result of interest rate benchmark reform by updating the effective interest rate.

A change in the basis for determining the contractual cash flows is required by the interest rate benchmark reform if the following conditions are met:

- (a) the change is necessary as a direct consequence of the reform; and
- (b) the new basis for determining the contractual cash flows is economically equivalent to the previous basis i.e. the basis immediately before the change.

When changes were made to a financial asset or financial liability in addition to changes to the basis for determining the contractual cash flows required by interest rate benchmark reform, the Company first updates the effective interest rate, and then applies the policies on accounting for modifications to the additional changes.

(g) 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.

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.

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

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for considerations.

1) As a lessee

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.

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 on a straight-line basis 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 separate 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 lessor

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

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.

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 investment grade defined by reliable credit rating agencies.

(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 each 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 heldfor-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 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 12 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 liability 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.

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

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 Allocation and Trading of Greenhouse Gas Emission* which became effective in Korea in 2015.

(a) Greenhouse Gases Emission Right

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

Emission rights held for the purpose of performing the obligation are classified as intangible asset and initially measured at cost and subsequently carried at cost less accumulated

impairment losses.

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. The emission liability is derecognized when submitted to the government.

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 in accordance with K-IFRS No. 1115.

(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".

(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.

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.

(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 common shares, which is presented at the end of the statement of comprehensive income. Basic EPS is calculated by dividing profit attributable to common shareholders of the Company by the weighted average number of common shares outstanding during the period, adjusted for own shares held. Diluted earnings per share is calculated by adjusting basic EPS and weighted average number of common shares, concerning the effect of all dilutive potential common shares.

New standards and interpretations not yet adopted

A number of new standards are effective for annual periods beginning after January 1, 2021 and earlier application is permitted but the Company has not early adopted the new or amended standards in preparing these financial statements.

(a) K-IFRS No. 1016 "Property, Plant and Equipment" - Proceeds Before Intended Use

The amendment prohibits an entity from deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while the entity is preparing the asset for its intended use. Instead, the entity will recognize the proceeds from selling such items, and the costs of producing those items, in profit or loss. The amendment is effective for annual periods beginning on or after January 1, 2022. Early application is permitted. The Company does not expect the effect of the amendments to the financial statements to be significant.

(b) K-IFRS No. 1012 "Income Tax"

The amendment clarifies the coverage of initial recognition exemptions accounting for deferred tax related to both assets and liabilities arising from a single transaction. If temporary differences arise, which are offsetting the same amount at the time of transaction, the Company would recognize deferred tax if it is not a business combination and affects neither accounting profit nor taxable profit(tax loss). The amendment is effective for annual periods beginning on or after January 1, 2023. Early application is permitted. The Company does not expect the effect of the amendments to the financial statements to be significant.

(c) K-IFRS No. 1001 "Presentation of Financial Statements" - Classification of Liabilities as Current or Non-current

The amendment clarifies that in order for the debtor to have the "right to defer settlement of the liability", the condition of complying with the contract must be met at the end of the reporting period, and the possibility of exercising the right to defer settlement of the liability for more than 12 months after the end of the reporting period does not affect the classification of debt liquidity. The amendment is effective for annual periods beginning on or after January 1, 2023. Early application is permitted. The Company does not expect the effect of the amendments to the consolidated financial statements to be significant.

4. Financial Risk Management

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

- Credit risk
- Liquidity risk
- Market risk
- Capital risk

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

A fundamental reform of major interest rate benchmark is being undertaken globally, including the replacement of some interbank offered rates (IBORs) with alternative nearly risk-free rates (referred to as "IBOR reform"). The publication of overnight and 1, 3, 6, and 12 months USD LIBOR will cease on June 30, 2023 and all other LIBOR publication has ceased on December 31, 2021.

As of December 31, 2021, only short-term borrowings with USD LIBOR as the benchmark rate are mostly associated with interest rate benchmark reform risk. All 3 months USD LIBORs are used as interest rate benchmark. As of December 31, 2021, the related short-term borrowings are W457,838 million, since all of their maturities come before June 30, 2023, there is no need for modification to alternative interest rate benchmark.

2 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.

③ 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.

④ 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, 2021 and 2020 is as follows:

(in millions of Won)		2021	2020
Total borrowings	₩	8,202,132	7,755,336
Less: Cash and cash equivalents		2,042,274	1,822,660
Net borrowings		6,159,858	5,932,676
Total equity	\mathbf{W}	49,035,425	45,114,704
Net borrowings-to-equity ratio		12.56%	13.15%

5. Cash and Cash Equivalents

Cash and cash equivalents as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020
Demand deposits and checking accounts	₩	372,915	298,876
Time deposits		713,015	900,700
Other cash equivalents		956,344	623,084
	₩	2,042,274	1,822,660

6. Trade Accounts and Notes Receivable

Trade accounts and notes receivable as of December 31, 2021 and 2020 are as follows:

(in millions of Won)	-	2021	2020
Current			
Trade accounts and notes receivable	₩	6,031,878	3,707,860
Less: Allowance for doubtful accounts	-	(14,370)	(14,325)
	₩	6,017,508	3,693,535
Non-current	_		
Trade accounts and notes receivable	₩	7,901	3,780
Less: Present value discount		(1,555)	(344)
Less: Allowance for doubtful accounts	-	(671)	(980)
	₩.	5,675	2,456

The Company sold trade accounts and notes receivable with recourse to financial institutions. These trade accounts and notes receivable have not been derecognized from the statement of financial position because the Company retains substantially all of the risks and rewards associated with the transferred assets. The amounts received on transfer have been recognized as secured borrowings. As of December 31, 2021 and 2020, the carrying amount of such secured borrowings are W214,465 million and W520,310 million, respectively, which are presented in the statements of financial position as short-term borrowings.

7. Other Receivables

Other receivables as of December 31, 2021 and 2020 are as follows:

(in millions of Won)	_	2021	2020
Current			
Loans	₩	-	2,950
Other accounts receivable		506,040	231,051
Others		41,361	50,822
Less: Allowance for doubtful accounts	_	(2,060)	(5,268)
	₩	545,341	279,555
Non-current	_		
Loans	₩	244,895	52,760
Long-term other accounts receivable		34,260	35,638
Others		4,185	4,001
Less: Allowance for doubtful accounts	_	(9,087)	(8,362)
	₩_	274,253	84,037

8. Other Financial Assets

(a) Other financial assets as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020
Current			
Debt securities	₩	154,750	153,370
Deposit instruments(*1)		1,436,915	1,337,881
Short-term financial instruments		8,013,857	8,116,381
	₩	9,605,522	9,607,632
Non-current			
Long-term derivative assets	₩	170,471	18,549
Equity securities		1,084,574	980,706
Debt securities		-	6,367
Other securities		71,492	67,161
Deposit instruments(*2)		28	34
	₩	1,326,565	1,072,817

- (*1) As of December 31, 2021 and December 31, 2020, W3,915 million and W4,881million, 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, 2021 and 2020 are as follows:

(in millions of Won)	2021								
	Number of Ownersh shares (%)			Acquisition cost	Fair value	Net changes in fair value of equity securities	Book value	Book value	
Marketable equity securities		() • 1				- 1			
Nippon Steel Corporation	15,698,500	1.65	₩	473,962	303,814	(170,148)	303,814	219,788	
KB Financial group Inc.	3,863,520	0.93		178,839	212,493	33,654	212,493	167,677	
Woori Financial Group Inc.	20,280,000	2.81		244,447	257,556	13,109	257,556	197,324	
CSN Mineracao S.A. (*1)	102,186,675	1.83		206,265	146,550	(59,715)	146,550	-	
SAMWONSTEEL Co., Ltd.	5,700,000	14.25		8,930	18,041	9,111	18,041	15,020	
DONGKUK INDUSTRIES COMPANY	2,611,989	4.82		11,911	9,260	(2,651)	9,260	8,868	
Others (8 companies) (*2)			_	62,753	51,717	(11,036)	51,717	35,939	
			_	1,187,107	999,431	(187,676)	999,431	644,616	
Non-marketable equity securities									
CSN Mineracao S.A. (*1, 3)				-	-	-	-	246,158	
POSCO PLANTEC Co., Ltd.	18,337,912	10.99		19,437	19,437	-	19,437	19,437	
Korea Nickel CO.LTD	75,600	14.00		10,194	10,194	-	10,194	10,194	
Poongsan Special Metal Corp.	315,790	5.00		7,657	7,657	-	7,657	7,657	
HANKUMCO.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 (*2)				-	-	-	-	4,165	
Others (28 companies)			_	143,571	39,042	(104,529)	39,042	39,666	
			_	189,672	85,143	(104,529)	85,143	336,090	
			₩_	1,376,779	1,084,574	(292,205)	1,084,574	980,706	

- (*1) During the year ended December 31, 2021, CSN Mineracao S.A. was listed on the Brazilian stock market, and a stock split of 1:30 was carried out at the same time as the listing. On the other hand, the Company sold 7,565,145 shares in the current year after stock split.
- (*2) During the year ended December 31, 2021, AJUSTEEL CO., LTD was listed on the Korea Stock Exchange and classified as marketable equity securities.
- (*3) As of December 31, 2020, fair value is based on an analysis performed by an external professional evaluation agency.

9. Inventories

(a) Inventories as of December 31, 2021 and 2020 are as follows:

(in millions of Won)	-	2021	2020
Finished goods	₩	1,164,685	709,323
Semi-finished goods		2,227,433	1,167,330
By-products		19,317	3,460
Raw materials		1,682,946	885,222
Fuel and materials		459,784	518,151
Materials-in-transit		2,073,218	814,397
Others	_	673	681
		7,628,056	4,098,564
Less: Allowance for inventories valuation	_	(4,854)	(4,735)
	₩	7,623,202	4,093,829

(b) The changes of allowance for inventories valuation for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)	_	2021	2020
Beginning	₩	4,735	7,677
Loss on Valuation of inventories		4,854	4,735
Utilization on sale of inventories		(4,735)	(7,677)
Ending	₩	4,854	4,735

10. Assets Held for Sale

Assets held for sale as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021(*1, 2)	2020
Assets Tangible assets(*3,4) Intangible assets	W	29,236 553	32,244
-	₩	29,789	32,244
Liabilities Others	$\overline{\mathbf{w}}$	185	-

- (*1) During the year ended December 31, 2021, the Company sold the land in the Yanghak Neighborhood Park development reserve area that was classified as held for sale and recognized W43,760 million of gain on disposal.
- (*2) During the year ended December 31, 2021, the Company decided to sell the emission rights and reclassified the emission rights to assets held for sale. Upon the sale, the Company recognized W1,316 million loss on disposal of assets held for sale.
- (*3) During the year ended December 31, 2019, the Company decided to dispose individual assets for which use was discontinued, such as CEM Plants, and classified the assets as held for sale. During the year ended December 31, 2020, the Company recognized an impairment loss of ₩5,030 million for the difference between the fair value less costs to sell and the carrying amount of the assets. During the year ended December 31, 2021, the Company disposed of the assets held for sale for ₩ 25,767 million.
- (*4) During the year ended December 31, 2021, the Company decided to dispose Synthetic Natural Gas (SNG) facility for which use was discontinued, and classified as asset held for sale.

11. Investments in Subsidiaries, Associates and Joint ventures

(a) Investments in subsidiaries, associates and joint ventures as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2020	
Investment in subsidiaries	₩	13,097,043	12,082,203
Investment in associates		859,032	742,710
Investment in joint ventures		2,046,565	2,058,239
	₩	16,002,640	14,883,152

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, 2021 and 2020 are as follows:

			2021						2020	
	Country	Principal operations	Number of shares	Ownership (%)		Net asset value	Acquisition cost	Book value	Book value	
[Domestic]										
POSCO INTERNATIONAL Corporation(*1)	Korea	Trading and natural resources exploration	77,616,018	62.91	₩	3,142,752	3,610,502	3,156,434	3,223,75	
POSCO ENGINEERING & CONSTRUCTION	Korea	Engineering and construction								
CO.,LTD.			22,073,568	52.80		3,113,521	1,014,314	1,014,314	1,014,31	
POSCO ENERGY CO., LTD.	Korea	Power generation, fuel cell								
		manufacturing and sales	40,234,508	89.02		1,458,597	658,176	658,176	658,17	
POSCO COATED & COLOR STEEL Co., Ltd.	Korea	Steel manufacturing and sales	3,412,000	56.87		315,921	108,421	108,421	108,42	
POSCO Capital	Korea	Investment in venture companies	19,700,000	95.00		181,650	103,780	103,780	103,78	
POSCO CHEMCAL CO., LTD(*2)	Korea	Refractory manufacturing and sales	46,261,601	59.72		2,331,321	985,020	895,707	207,63	
POSCO O&MCo., Ltd(*3)		Business facility maintenance	902,946	47.17		238,143	73,374	73,374	73,37	
POSCO ICT	Korea	Computer hardware and software distribution	99.403.282	65.38		353.566	70.990	70.990	70.99	
POSSO MERCINE	K		99,403,282	05.38		303,000	70,990	70,990	70,99	
POSCO MITECH(*3)	Korea	Packing materials manufacturing and sales	20.342.460	48.85		104.565	107,278	107.278	107.27	
Busan E&E Co., Ltd.(*4)	K	Municipal solid waste fuel	20,342,400	48.85		104,000	107,278	107,278	107,27	
Busan Ede Co., Ltd.(-4)	Korea	and power generation	6.029.660	70.00		51.349	30.148	30.148	30.14	
POSCO Lithium Solution Co., Ltd.(*5)	Korea	Lithium manufacturing and sales	30.000.000	100.00		148.736	150.000	150.000	30,14	
Others (13 companies)	Norea	Lithium manufacturing and sales	30,000,000	100.00		633.833	398.116	384,735	110.99	
Others (13 companies)					-	12.073.954	7.310.119	6.753.357	5.708.86	
[Equation]						12,073,994	7,310,119	0,/03,30/	5,708,80	
[Foreign]										
PT. KRAKATAU POSCO	Indonesia	Steel manufacturing and sales	739,900	70.00		224,569	813,431	633,421	633,42	
POSCO WAPTY LTD	Australia	Iron ore sales and mine development	631,160,435	100.00		509,874	646,574	646,574	645,83	
POSCO Maharashtra Steel Private Limited	India	Steel manufacturing and sales	361,789,958	100.00		523,579	722,569	722,569	722,56	
POSCO Canada Ltd.	Canada	Coal sales	1,099,885	100.00		727,144	560,879	560,879	560,87	
POSCO AUSTRALIA PTY LTD	Australia	Iron ore sales and mine development	761,775	100.00		763,720	330,623	330,623	330,62	
POSCO (Zhangjiagang) Stainless Steel Co., Ltd.	China	Stainless steel manufacturing and sales	2,285,407,454	58.60		738,914	283,845	283,845	283,84	
POSCO Thainox Public Company Limited	Thailand	Cold rolled STS manufacturing and sales	5,812,634,019	74.56		347,764	443,758	178,785	178,78	
POSCO-China Holding Corp.	China	Holding company	-	100.00		537,288	593,841	593,841	593,84	
POSCO-India Private Limited	India	Steel manufacturing and sales	764,999,999	99.99		87,620	184,815	75,567	75,56	
POSCO MEXICO S.A. DE C.V.	Mexico	Plate steel manufacturing and sales	2,686,745,272	83.28		223,202	180,072	180,072	180,07	
POSCO America Corporation	USA	Researching and consulting	437,941	99.45		100,311	192,156	192,156	192,15	
POSCO-VIETNAMCo., Ltd.	Vietnam	Steel manufacturing and sales	-	100.00		51,135	160,572	160,572	160,57	
POSCO VST CO., LTD.	Vietnam	Stainless steel manufacturing and sales	-	95.65		68,357	144,573	144,573	144,57	
POSCO(Guangdong) Automotive										
Steel Co., Ltd.(*6)	China	Plate steel manufacturing and sales							52,93	
POSCO COATED STEEL (THAILAND) CO., LTD.	Thailand	Plate steel manufacturing and sales	36,000,000	100.00		82,479	121,592	121,592	121,59	
POSCO Asia Co., Ltd.	Hong Kong	Activities Auxiliary to financial service	9,360,000	100.00		221,526	117,710	117,710	117,71	
POSCO ASSAN TST STEEL INDUSTRY	Turkey	Steel manufacturing and sales	144,579,160	60.00		34,474	92,800	71,707	71,70	
POSCO JAPAN Co., Ltd.	Japan	Steel trading	90,438	100.00		186,699	68,436	68,436	68,43	
Qingdao Pohang Stainless Steel Co., Ltd. POSCO(Suzhou) Automotive	China	Stainless steel manufacturing and sales	-	70.00		135,178	65,982	65,982	65,98	
Processing Center Co., Ltd.	China	Steel manufacturing and sales	-	90.00		171,545	62,494	62,494	62,49	
POSCO AFRICA (PROPRIETARY) LIMITED	South Africa	Mne development	1,390	100.00		30,395	50,297	50,297	50,29	
POSCO-Malaysia SDN. BHD.	Malaysia	Steel manufacturing and sales	144,772,000	81.79		(1,860)	45,479	45,479	45,47	
POSCO Argentina S.A.U.	Argentina	Mneral exploration, manufacturing								
		and sale	1,328,820	100.00		373,931	376,906	376,906	373,36	
POSCO YAMATO VINA STEEL JOINT	Vietnam	Steel manufacturing and sales								
STOCK COMPANY			425,606,598	51.00		274,150	453,147	130,526	130,52	
Others (29 companies)					_	1,033,638	529,484	529,080	510,07	
						7,445,632	7,242,035	6,343,686	6,373,33	
					14/	19.519.586	14,552,154	13.097.043	12.082.203	

(*1) As of December 31, 2021, the Company performed the impairment test on investment in POSCO INTERNATIONAL Corporation due to evidences of impairment such as continuous decline in fair value. The recoverable amount was determined based on its value in use, which is estimated from the present value of estimated future cash flows discounted at 8.14%. As a result of the impairment test, the Company has recognized W67,326 million of impairment loss.

- (*2) During the year ended December 31, 2021, the Company acquired W688,076 million in additional subsidiary investment shares by participating in POSCO CHEMICAL CO., LTD's paid-in capital increase.
- (*3) 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.
- (*4) As of December 31, 2020, the investments in a subsidiary amounting to W30,148 million were provided as collateral in relation to the loan agreement of Busan E&E Co., Ltd. On the other hand, during the year ended December 31, 2021, Busan E&E repaid the liability and the collateral is released.
- (*5) During the year ended December 31, 2021, the Company established POSCO Lithium Solution Co., Ltd.
- (*6) During the year ended December 31, 2021, the Company newly acquired interests in HBIS-POSCO Automotive Steel Co., Ltd through investment in kind with shares in POSCO (Guangdong) Automotive Steel Co., Ltd. which was a subsidiary.
- (c) Details of associates and carrying amounts as of December 31, 2021 and 2020 are as follows:

(in millions of Won)			2021					2020	
	Country	Principal operations	Number of shares	Ownership (%)	_	Net asset value	Acquisition cost	Book value	Book value
[Domestic] EQP POSCO Global NO1 Natural Resources									
Private Equity Fund SNNC	Korea Korea	Investment in venture companies STS material manufacturing	169,316,307,504	40.57	₩	399,765	169,316	169,316	169,316
QSONE CoLtd.	Korea	and sales Real estate rental and facility	18,130,000	49.00		391,349	100,655	100,655	100,655
		management	200,000	50.00		172,116	85,550	85,550	85,550
Others (8 companies)					-	120,808 1,084,038	22,158 377,679	21,331 376,852	22,977 378,498
[Foreign]									
Nickel Mining Company SAS	New Caledonia	Raw material manufacturing and sales	3.234.698	49.00		168.181	189.197	189.197	189.197
9404-5515 Quebec Inc.(*1) Zhongyue POSCO (Qinhuangdao)	Canada	Investments	114,452,000	10.40		1,317,332	124,341	124,341	124,341
Tinplate Industrial Co., Ltd	China	Tinplate manufacturing and sales	-	24.00		61,590	11,003	11,003	11,003
FOM Australia Holdings Pty Ltd(*2) Others (7 companies)	Australia	Non ferrous metal mining	186,000,030	30.00		326,508 116,628	109,568 56,573	109,568 48,071	- 39,671
					_	1,990,239	490,682	482,180	364,212
					₩_	3,074,277	868,361	859,032	742,710

- (*1) As of December 31, 2021, it was classified as an associate even though the Company's ownership percentage is less than 20% since the Company has significant influence over the investee when considering the structure of its Board of Directors and others.
- (*2) During the year ended December 31, 2021, the Company acquired the shares of FQM Australia Holdings Pty Ltd.

(d) Details of joint ventures and carrying amounts as of December 31, 2021 and 2020 are as follows:

(in millions of Won)						2021			2020
	Country	Principal operations	Number of shares	Ownership (%)		Net asset value	Acquisition cost	Book value	Book value
Roy Hill Holdings Pty Ltd(*1)	Australia	Natural resources exploration	10.494.377	10.00	₩	6.938.100	1.225.464	1.225.464	1.225.464
CSP - Compania Siderurgica do Pecem(*2)	Brazil	Steel manufacturing and sales	1,578,377,432	20.00		234,993	676,060	175,990	296,720
POSCO-NPS Niobium LLC KOBRASCO	USA Brazil	Foreign investments in mining Steel materials manufacturing	325,050,000	50.00		787,383	364,609	364,609	364,609
HBIS-POSCO Automotive Steel Co., Ltd(*3)	China	and sales Steel manufacturing and	2,010,719,185	50.00		136,592	98,962	98,962	98,962
	onind	sales	-	50.00		240,880	109,057	109,057	-
Others (3 companies)					_	437,110 8,775,058	72,483 2,546,635	72,483 2,046,565	72,484 2,058,239

- (*1) As of December 31, 2021 and December 31, 2020, the investments in joint ventures amounting to W1,225,464 million were provided as collateral in relation to loans from project financing of Roy Hill Holdings Pty Ltd.
- (*2) As of December 31, 2021, the Company performed the impairment test on investment in CSP Compania Siderurgica do Pecem due to evidences of impairment such as continuous operating losses. Recoverable amount was determined based on its value in use, which is estimated from the present value of estimated future cash flows discounted at 9.98%. As a result of the impairment test, the Company has recognized W139,906 million of impairment loss.
- (*3) During the year ended December 31, 2021, the Company newly acquired interests in HBIS-POSCO Automotive Steel Co., Ltd through investment in kind in shares in POSCO (Guangdong) Automotive Steel Co., Ltd which was a subsidiary.

12. Investment Property, Net

(a) Investment property as of December 31, 2021 and 2020 are as follows:

(in millions of Won)			202	1	2020					
	-	Acquisition cost	Accumulated depreciation	Accumulated impairment	Book value	Acquisition cost	Accumulated depreciation	Accumulated impairment	Book value	
Land	₩	89,033	-	(1,465)	87,568	91,313	-	(1,465)	89,848	
Buildings		157,218	(108,206)	(23)	48,989	159,429	(107,989)	(23)	51,417	
Structures	_	22,507	(14,924)	-	7,583	22,910	(14,558)		8,352	
	₩	268,758	(123,130)	(1,488)	144,140	273,652	(122,547)	(1,488)	149,617	

The fair value of investment property as of December 31, 2021 is W718,412 million.

(b) Changes in the carrying amount of investment property for the years ended December 31, 2021 and 2020 were as follows:

1) For the year ended December 31, 2021

(in millions of Won)		Beginning	Depreciation(*1)	Transfer(*2)	Ending
Land	₩	89,848	-	(2,280)	87,568
Buildings		51,417	(3,998)	1,570	48,989
Structures		8,352	(598)	(171)	7,583
	₩_	149,617	(4,596)	(881)	144,140

- (*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 changes in rental ratio and the purpose of use.

2) For the year ended December 31, 2020

(in millions of Won)		Beginning	Depreciation(*1)	Transfer(*2)	Ending
Land	₩	91,738	-	(1,890)	89,848
Buildings		57,228	(4,033)	(1,778)	51,417
Structures		9,111	(609)	(150)	8,352
	₩	158,077	(4,642)	(3,818)	149,617

- (*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 changes in rental ratio and the purpose of use.

13. Property, Plant and Equipment, Net

(a) Property, plant and equipment as of December 31, 2021 and 2020 are as follows:

(in millions of Won)				2021					2020		
		Acquisition cost	Accumulated depreciation	Accumulated impairment	Government grants	Book value	Acquisition cost	Accumulated depreciation	Accumulated impairment	Government grants	Book value
Land	₩	1,349,266	-	-	-	1,349,266	1,401,605	-	-	-	1,401,605
Buildings		6,579,253	(4,384,940)	(15,249)	(3,773)	2,175,291	6,296,762	(4,199,534)	(12,551)	(3,834)	2,080,843
Structures		5,003,881	(2,904,479)	(2,740)	-	2,096,662	4,827,750	(2,745,351)	(9,302)	-	2,073,097
Machinery and equipment		40,618,619	(28,273,986)	(45,021)	-	12,299,612	39,602,537	(26,871,213)	(79,893)	-	12,651,431
Vehicles		219,191	(200,370)	-	(464)	18,357	211,444	(196,820)	-	(138)	14,486
Tools		215,682	(190,791)	-	-	24,891	211,212	(186,879)	-	-	24,333
Furniture and fixtures		322,407	(233,794)	(5)	(84)	88,524	269,039	(224,488)	(26)	(99)	44,426
Lease assets		616,302	(167,974)	-	-	448,328	452,908	(121,320)	-	-	331,588
Construction-in-progress		1,376,352		(99,983)	(5,001)	1,271,368	2,450,961		(850,838)	(5,000)	1,595,123
	₩	56,300,953	(36,356,334)	(162,998)	(9,322)	19,772,299	55,724,218	(34,545,605)	(952,610)	(9,071)	20,216,932

- (b) Changes in the carrying amount of property, plant and equipment for the years ended December 31, 2021 and 2020 were as follows:
 - 1) For the year ended December 31, 2021

(in millions of Won)	_	Beginning	Acquisitions	Disposals	Depreciation	Impairment(*1,2)	Others(*3)	Ending
Land	₩	1,401,605	-	(49,131)	-	-	(3,208)	1,349,266
Buildings		2,080,843	5,870	(514)	(206,062)	(17,406)	312,560	2,175,291
Structures		2,073,097	1,287	(14,384)	(182,926)	(3,733)	223,321	2,096,662
Machinery and equipment		12,651,431	52,534	(27,432)	(1,812,571)	(42,126)	1,477,776	12,299,612
Vehicles		14,486	3,290	(5)	(7,670)	-	8,256	18,357
Tools		24,333	4,652	(14)	(11,283)	-	7,203	24,891
Furniture and fixtures		44,426	8,126	(159)	(17,745)	-	53,876	88,524
Lease assets		331,588	130,610	-	(46,654)	-	32,784	448,328
Construction-in-progress		1,595,123	1,987,316	(6,027)	-	(164,906)	(2,140,138)	1,271,368
	₩	20,216,932	2,193,685	(97,666)	(2,284,911)	(228,171)	(27,570)	19,772,299

- (*1) The Company estimated the recoverable amount of individual assets that it ceased their use due to the disposal plan and others at fair value less costs to sell based on sale price or scrap value, and recognized an impairment loss since recoverable amounts are less than their carrying amounts for the year ended December 31, 2021. During the year ended December 31, 2021, the Company recognized impairment losses on damaged assets caused by the fire.
- (*2) The Company decided to stop the intended use for Synthetic Natural Gas (SNG) facility and sell the related assets. The Company estimated the recoverable amount based on expected sale price and recognized W223,273 million of impairment loss in 2021. The remaining balances were classified as assets held for sale as of December 31, 2021.
- (*3) Represents assets transferred from construction-in-progress to intangible assets and other property, plant and equipment, assets transferred from investment properties, assets transferred to assets held for sale, and others.

2) For the year ended December 31, 2020

(in millions of Won)	_	Beginning	Acquisitions	Disposals	Depreciation	Impairment(*1)	Others(*2)	Ending
Land	₩	1,398,081	-	(6)	-	-	3,530	1,401,605
Buildings		2,100,503	3,144	(2,397)	(207,818)	(271)	187,682	2,080,843
Structures		2,030,853	4,037	(6,349)	(174,343)	(883)	219,782	2,073,097
Machinery and equipment		12,602,435	48,747	(22,913)	(1,796,038)	(9,422)	1,828,622	12,651,431
Vehicles		9,951	1,497	(8)	(6,571)	-	9,617	14,486
Tools		27,288	4,007	(3)	(12,052)	-	5,093	24,333
Furniture and fixtures		38,329	4,399	(179)	(11,811)	-	13,688	44,426
Lease assets		262,368	21,920		(60,358)	-	107,658	331,588
Construction-in-progress		1,662,391	2,406,273	(4,872)	-	(17,270)	(2,451,399)	1,595,123
	₩ _	20,132,199	2,494,024	(36,727)	(2,268,991)	(27,846)	(75,727)	20,216,932

- (*1) The Company estimated the recoverable amount of individual assets that it ceased their use due to the disposal plan and others at fair value less costs to sell based on sale price or scrap value and recognized an impairment loss since recoverable amounts are less than their carrying amounts for the year ended December 31, 2020. During the year ended December 31, 2020, the Company recognized impairment losses on damaged assets caused by a fire accident.
- (*2) Represents assets transferred from construction-in-progress to intangible assets and other property, plant and equipment, assets transferred from investment properties, assets transferred to assets held for sale, and others.
- (c) Borrowing costs capitalized and the capitalized interest rate for the years ended December 31, 2021 and 2020 are as follows:

(in millions of Won)	_	2021	2020
Weighted average expenditure	₩	929,976	929,552
Borrowing costs capitalized		24,465	29,566
Capitalization rate		2.63%	3.18%

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

- 1) Right-of-use assets
- ① Changes in the carrying amount of right-of-use assets presented as property, plant and equipment for the year ended December 31, 2021 were as follows:

(in millions of Won)		Beginning	Acquisitions	Depreciation	Others(*1)	Ending
Land	₩	8,703	-	(301)	-	8,402
Buildings		71,431	3,471	(7,244)	-	67,658
Structures		59,221	-	(5,212)	-	54,009
Machinery and equipment		54,698	-	(8,532)	37,124	83,290
Vehicles		6,255	-	(500)	-	5,755
Ships		106,555	120,217	(16,714)	-	210,058
Furniture and fixtures		24,725	6,922	(8,151)	(4,340)	19,156
	₩	331,588	130,610	(46,654)	32,784	448,328

(*1) Increased due to the revised lease term of machinery and equipment.

② Changes in the carrying amount of right-of-use assets presented as property, plant and equipment for year ended December 31, 2020 were as follows:

(in millions of Won)		Beginning	Acquisitions	Depreciation	Others	Ending
Land	₩	-	8,853	(150)	-	8,703
Buildings		71,921	6,075	(6,565)	-	71,431
Structures		64,434	-	(5,213)	-	59,221
Machinery and equipment		60,198	-	(5,500)	-	54,698
Vehicles		6,755	-	(500)	-	6,255
Ships		24,082	111,537	(29,064)	-	106,555
Furniture and fixtures		34,978	6,992	(13,366)	(3,879)	24,725
	₩	262,368	133,457	(60,358)	(3,879)	331,588

2) Amount recognized in profit or loss

The amount recognized in profit or loss related to leases for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)	_	2021	2020
Interest on lease liabilities	₩	12,353	10,172
Expenses relating to short-term leases		3,394	3,544
Expenses relating to leases of low-value assets		6,017	6,100
	\mathbf{W}	21,764	19,816

14. Intangible Assets, Net

(a) Intangible assets as of December 31, 2021 and 2020 are as follows:

(in millions of Won)			20	21			2020				
		Acquisition cost	Accumulated amortization	Accumulated impairment	Book value	Acquisition cost	Accumulated amortization	Accumulated impairment	Book value		
Intellectual property rights	₩	52,011	(29,165)	-	22,846	47,028	(24,270)	-	22,758		
Membership		87,423	-	(2,665)	84,758	84,483	-	(2,688)	81,795		
Development expense		647,848	(471,036)	-	176,812	619,411	(394,557)	-	224,854		
Port facilities usage rights		682,305	(469,497)	-	212,808	682,305	(448,858)	-	233,447		
Construction-in-progress		32,392	-	-	32,392	34,924	-	-	34,924		
Other intangible assets		312,359	(271,552)	(19,013)	21,794	303,695	(267,715)	(11,832)	24,148		
	₩	1,814,338	(1,241,250)	(21,678)	551,410	1,771,846	(1,135,400)	(14,520)	621,926		

(b) Changes in the carrying amount of intangible assets for the years ended December 31, 2021 and 2020 were as follows:

1) For the year ended December 31, 2021

(in millions of Won)	_	Beginning	Acquisitions	Disposals	Amortization	Impairment(*2)	Transfer(*3)	Ending
Intellectual property rights	₩	22,758	-	(573)	(6,145)	-	6,806	22,846
Membership(*1)		81,795	3,690	(727)	-	-	-	84,758
Development expense		224,854	2,000	-	(76,588)	-	26,546	176,812
Port facilities usage rights		233,447	-	-	(20,639)	-	-	212,808
Construction-in-progress		34,924	28,590	(4,770)	-	-	(26,352)	32,392
Other intangible assets	_	24,148	15,775	(10,030)	(4,093)	(7,180)	3,174	21,794
	₩_	621,926	50,055	(16,100)	(107,465)	(7,180)	10,174	551,410

- (*1) Economic useful life of membership is indefinite.
- (*2) During the year ended December 31, 2021, the Company decided to sell a portion of paid-in emission rights and recognized impairment loss which is the difference between carrying amount and net fair value.
- (*3) 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, 2020

(in millions of Won)	_	Beginning	Acquisitions	Disposals	Amortization	Transfer(*2)	Ending
Intellectual property rights	₩	24,545	-	(3,609)	(6,140)	7,962	22,758
Membership(*1)		82,657	-	(862)	-	-	81,795
Development expense		86,023	1,579	(16)	(50,827)	188,095	224,854
Port facilities usage rights		278,072	-	-	(44,625)	-	233,447
Construction-in-progress		137,273	88,376	-	-	(190,725)	34,924
Other intangible assets		100,345	19,785	(61,446)	(5,334)	(29,202)	24,148
	₩_	708,915	109,740	(65,933)	(106,926)	(23,870)	621,926

- (*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.

15. Other Assets

Other current assets and other long-term assets as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020
Current			
Advance payments	₩	17,398	4,263
Prepaid expenses		25,406	26,011
Emission rights purchased from the market		12,440	20,224
	₩	55,244	50,498
Non-current			
Long-term prepaid expenses	₩	3,659	4,312
Others(*1)		30,707	103,266
	₩_	34,366	107,578

(*1) As of December 31, 2020, the Company recognized tax assets amounting to ₩100,852 million based on the Company's best estimate of the income 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. During the year ended December 31, 2021, the tax amounts were refunded.

16. Borrowings

(a) Borrowings as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020
Short-term borrowings			
Short-term borrowings	₩	672,303	1,029,363
Current portion of debentures		1,402,750	1,379,739
Less: Current portion of discount on debentures issued		(2,699)	(710)
	₩	2,072,354	2,408,392
Long-term borrowings			
Long-term borrowings	₩	1,210	1,110
Debentures		6,146,233	5,373,840
Less: Discount on debentures issued		(17,665)	(28,006)
	₩	6,129,778	5,346,944

(b) Short-term borrowings as of December 31, 2021 and 2020 are as follows:

(in millions of Won)	Lenders	lssuance date	Maturity date	Annual interest rate (%)		2021	2020
Transfers of account receivables that do not qualify for derecognition	-	-	-	-	₩	214,465	520,310
Borrowings in foreign trade	MUFG and others	2021.10.19~ 2021.12.29	2022.01.14~ 2022.03.29	0.53~0.76	₩_	<u>457,838</u> 672,303	<u>509,053</u> 1,029,363

(c) Current portion of debentures as of December 31, 2021 and 2020 are as follows:

(in millions of Won)	Lenders	lssuance date	Maturity date	Annual interest rate (%)		2021	2020
Debentures	Domestic debentures 309-1 and the other	2019.07.17~ 2019.10.16	2022.07.17~ 2022.10.14	1.56~1.61	₩	809,447	459,811
Foreign debentures	Global debentures 6	2019.11.12	2022.11.12	2.38	_	590,604	919,218
					₩_	1,400,051	1,379,029

(d) Long-term borrowings and others excluding current portion, as of December 31, 2021 and 2020 are as follows:

(in millions of Won)	Lenders	lssuance date	Maturity date	Annual interest rate (%)	2021	2020
Foreign borrowings	KOREA ENERGY AGENCY	2007.12.27~		3 year		
		2008.12.29	2022.12.29	Government bond $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	1,210	1,110
Debentures	Domestic debentures 306-3	2013.10.04~	2023.10.04~			
	and others	2021.09.16	2029.10.16	1.64~3.64	1,736,868	2,046,166
Foreign debentures	Global debentures 4	2018.08.01~	2023.01.17~			
	and others	2020.01.17	2025.01.17	0.50~4.00	2,956,507	3,299,668
Exchangeable bonds(*1)	Foreign currency					
	exchangeable bonds	2021.09.01	2026.09.01		1,435,193	
				₩_	6,129,778	5,346,944

(*1) The issuance conditions of the exchangeable bonds issued by the Company are as follows :

	Foreign currency exchangeable bonds				
Type of bond	Exchangeable bonds				
Aggregate principal amount	EUR 1,065,900,000				
Interest rate	- Coupon rate : -				
	- Yield to maturity : (0.78%)				
Maturity date	September 1, 2026				
Redemption	- Redemption at maturity: Outstanding bond principal, which is not repaid early or which call option				
	is not exercised on, is repaid at maturity as a lump sum - Prepayment: The issuer has call option and the bondholders have put option				
Evelopeo roto	- Prepayment: The issuer has call option and the bondholders have put option 100%				
Exchange rate Exchange price	100 %				
(Won/share)	486,539(*1)				
Underlying shares	Registered common shares(treasury shares)				
Exchange period	From October 12, 2021 to August 22, 2026				
Adjustments for exchange price	Adjusting the exchang price according to the terms and conditions of the bond in the events of reason for adjusting the exchange price such as, bonus issue, share split, share consolidation, change of share type, issuance of options or warranties to shareholders, share dividend, cash dividend, rights issue under the market price				
Put option by bondholders	- 3 years(September 1, 2024) from the closing date - In the event of a change of control of the Company				
	 Where the shares issued by the Company are delisted (or suspended for more than 30 consecutive trading days) 				
Call option by the issuer	 Share price(based on closing price) is higher than 130% of exchange price for more than 20 trading days during 30 consecutive trading days in a row, after 3 years (September 1, 2024) from the closing day to 30 business days before the maturity of bonds When the outstanding balance of outstanding bonds is less than 10% of the total issuance(Clean Up Call) 				
	- Where additional reasons for tax burden arise due to the amendment of relevant laws and regulations, etc				

(*1) The exchange price has changed due to cash dividends during the year ended December 31, 2021.

The Company has designated exchangeable bonds listed on the Singapore Stock Exchange as financial liabilities measured at fair value through profit or loss. The quoted transaction price is used in fair value measurement, and changes in fair value are recognized in profit or loss.

17. Other Payables

Other payables as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020
Current			
Accounts payable	\mathbf{W}	727,844	606,902
Accrued expenses		475,056	412,976
Dividend payable		3,237	1,854
Lease liabilities		48,062	94,904
Withholdings		13,260	10,687
	₩ _	1,267,459	1,127,323
Non-current			
Long-term accrued expenses	\mathbf{W}	27	54
Lease liabilities		398,513	217,458
Long-term withholdings		604	3,100
	₩ _	399,144	220,612

18. Other Financial Liabilities

Other financial liabilities as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020
Current			
Derivative liabilities	₩	3,429	3,087
Financial guarantee liabilities		10,326	9,701
	₩_	13,755	12,788
Non-current			
Derivative liabilities	₩	-	92,273
Financial guarantee liabilities		21,991	29,881
	₩_	21,991	122,154

19. Provisions

(a) Provisions as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		20	021	2020		
	_	Current	Non-current	Current	Non-current	
Provision for bonus payments(*1,2)	₩	21,365	25,155	14,518	34,461	
Provision for restoration(*3)		5,902	6,601	5,136	12,425	
Provision for legal contingencies and claims		-	-	4,937	2,052	
Emission liability(*4)		34,059	-	20,224	-	
Provision for product warranties(*5)		23,083	4,999	18,789	3,664	
	₩	84,409	36,755	63,604	52,602	

(*1) Represents the provision for bonuses limited to 100% of annual salaries for executives.

- (*2) During the December 31, 2021 and 2020, the Company measured the present value of the estimated future payments based on actuarial evaluations of the Long Term Service Rewards in operation, and provisions were recognized at W29,392 million and W33,146 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, 2021. 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 2.08% ~2.34% to assess present value of these costs.
- (*4) The Company has recognized emission liabilities for greenhouse gas emissions exceeding the quantity of free quota emission rights expected to be submitted as of December 31, 2021.
- (*5) As of December 31, 2021, the Company recognized the expected claim cost to be charged as a provision.

(b) Changes in provisions for the years ended December 31, 2021 and 2020 were as follows:

1) For the year ended December 31, 2021

(in millions of Won)		Beginning	Increase	Reversal	Utilization	Ending
Provision for bonus payments	₩	48,979	74,240	-	(76,699)	46,520
Provision for restoration		17,561	291	(186)	(5,163)	12,503
Provision for legal contingencies and claims		6,989	2,500	(2,052)	(7,437)	-
Emission liability		20,224	34,059	(19,391)	(833)	34,059
Provision for product warranties		22,453	27,434	-	(21,805)	28,082
	₩	116,206	138,524	(21,629)	(111,937)	121,164

2) For the year ended December 31, 2020

(in millions of Won)		Beginning	Increase	Reversal	Utilization	Ending
Provision for bonus payments	₩	49,836	25,853	-	(26,710)	48,979
Provision for restoration		22,725	363	(340)	(5,187)	17,561
Provision for legal contingencies and claims		2,388	4,937	(285)	(51)	6,989
Emission liability		-	20,648	(424)	-	20,224
Provision for product warranties		-	48,137		(25,684)	22,453
	₩	74,949	99,938	(1,049)	(57,632)	116,206

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, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Expense related to post-employment benefit plans under defined contribution plans	₩	39,686	37,913

(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, 2021 and 2020 are as follows:

(in millions of Won)	-	2021	2020
Present value of funded obligations	₩	1,330,938	1,378,597
Fair value of plan assets	_	(1,543,469)	(1,455,098)
Net defined benefit liabilities	₩ _	(212,531)	(76,501)

2) Changes in present value of defined benefit obligations for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Defined benefit obligation at the beginning of period	₩	1,378,597	1,435,942
Current service costs		123,312	125,706
Interest costs		28,892	27,712
Remeasurement :		(49,259)	(74,678)
- Loss (gain) from change in financial assumptions		(103,452)	(74,276)
- Loss (gain) from change in demographic assumptions		91	(4,608)
- Loss from change in others		54,102	4,206
Amount transferred from associate		-	1,104
Reclassification to liabilities directly related to assets			
held for sale		(5,675)	-
Benefits paid		(144,929)	(137,189)
Defined benefit obligation at the end of period	₩	1,330,938	1,378,597

3) Changes in the fair value of plan assets for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Fair value of plan assets at the beginning of period	₩	1,455,098	1,381,796
Interest on plan assets		31,145	27,227
Remeasurement of plan assets		(4,534)	(450)
Contributions to plan assets		200,000	178,000
Amount transferred from associate		-	1,104
Reclassification to liabilities directly related to assets			
held for sale		(5,490)	-
Benefits paid	-	(132,750)	(132,579)
Fair value of plan assets at the end of period	₩	1,543,469	1,455,098

The Company expects to make an estimated contribution of W50,000 million to the defined benefit plan assets in 2022.

4) The fair value of plan assets as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020
Debt instruments	₩	496,936	455,224
Deposits		1,024,370	999,733
Others		22,163	141
	₩	1,543,469	1,455,098

5) The amounts recognized in the statements of comprehensive income for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)	_	2021	2020
Current service costs Net interest costs(*1)	₩	123,312 (2,253)	125,706 485
	₩	121,059	126,191

(*1) The actual return on plan assets amounted to W26,611 million and W26,777 million for the years ended December 31, 2021 and 2020, respectively.

The above expenses by function were as follows:

(in millions of Won)		2021	2020
Cost of sales	₩	89,775	100,278
Selling and administrative expenses		30,734	25,044
Others		550	869
	₩	121,059	126,191

6) Remeasurements of defined benefit plans, net of tax recognized in other comprehensive income (loss) for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Beginning Remeasurements of	₩	(315,366)	(369,181)
defined benefit plans		44,725	74,228
Tax effects		(12,299)	(20,413)
Ending	₩	(282,940)	(315,366)

7) The principal actuarial assumptions as of December 31, 2021 and 2020 are as follows:

	2021	2020
Discount rate	2.96%	2.40%
Expected future increases in salaries(*1)	3.90%	4.40%

(*1) The expected future increases in salaries are based on the average salary increase rate for the past five 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% In	crease	1% Decrease		
	_	Amount	Percentage (%)	Amount	Percentage (%)	
Discount rate	₩	(79,119)	(5.9)	104,829	7.9	
Expected future increases in salaries		106,178	8.0	(81,606)	(6.1)	

9) As of December 31, 2021 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	₩	200,428	516,229	242,400	441,124	247,713	1,647,894

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

21. Other Liabilities

Other liabilities as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020
Current			
Advances received	₩	24,807	41,901
Withholdings		60,535	24,253
Unearned revenue		59,619	14,522
	₩	144,961	80,676
Non-current			
Unearned revenue	\mathbf{W}	3,744	525

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, 2021 and 2020 are as follows:
 - ① December 31, 2021

(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	₩	170,471	-	170,471	-	170,471
Short term financial instruments		8,013,857	-	8,013,857	-	8,013,857
Debt securities		4,750	-	-	4,750	4,750
Other securities		71,492	-	-	71,492	71,492
Other receivables		2,000	-	-	2,000	2,000
Fair value through other comprehensive income						
Equity securities		1,084,574	999,431	-	85,143	1,084,574
Financial assets measured at amortized cost(*1)						
Cash and cash Equivalents		2,042,274	-	-	-	-
Trade accounts and notes receivable		6,005,022	-	-	-	-
Debt securities		150,000	-	-	-	-
Other receivables		495,306	-	-	-	-
Deposit instruments	_	1,436,943	-	-	-	-
	₩	19,476,689	999,431	8,184,328	163,385	9,347,144
Financial liabilities						
Fair value through profit or loss						
Derivative liabilities	₩	3,429	-	3,429	-	3,429
Borriwings		1,435,193	1,435,193	-	-	1,435,193
Financial liabilities measured at amortized cost(*1)						
Trade accounts and notes payable		2,453,068	-	-	-	-
Borrowings		6,766,939	-	6,875,206	-	6,875,206
Financial guarantee liabilities		32,317	-	-	-	-
Others	-	1,546,986	-	-	-	-
	₩	12,237,932	1,435,193	6,878,635		8,313,828

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

② December 31, 2020

(in millions of Won)				Fair va	alue	
		Book value	Level 1	Level 2	Level 3	Total
Financial assets	-					
Fair value through profit or loss						
Derivate assets	₩	18,549	-	18,549	-	18,549
Short-term financial instruments		8,116,381	-	8,116,381	-	8,116,381
Debt securities		8,050	-	-	8,050	8,050
Other securities		67,161	-	-	67,161	67,161
Other receivables		2,000	-	-	2,000	2,000
Fair value through other comprehensive income						
Equity securities		980,706	644,616	-	336,090	980,706
Debt securities		1,687	-	-	1,687	1,687
Financial assets measured at amortized cost(*1)		·				
Cash and cash Equivalents		1,822,660	-	-	-	-
Trade accounts and notes receivable		3,685,573	-	-	-	-
Debt securities		150,000	-	-	-	-
Other receivables		272,846	-	-	-	-
Deposit instruments		1,337,915	-	-	-	-
	₩ -	16,463,528	644,616	8,134,930	414,988	9,194,534
Financial liabilities						
Fair value through profit or loss						
Derivative liabilities	₩	95,360	-	95,360	-	95,360
Financial liabilities measured at amortized cost(*1)						
Trade accounts and notes payable		1,258,470	-	-	-	-
Borrowings		7,755,336	-	8,026,373	-	8,026,373
Financial guarantee liabilities		39,582	-	-	-	-
Others	-	1,335,672				-
	₩	10,484,420	_	8,121,733	_	8,121,733

- (*1) Fair value of financial assets and liabilities measured at amortized cost except borrowings approximates their 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, 2021 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	₩	163,385	Asset value approach	-	-	

② Changes in fair value of financial assets and financial liabilities classified as Level 3 for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)	_	2021	2020
Beginning	₩	414,988	434,151
Acquisition		44,908	41,547
Gain or loss on valuation of financial assets		(36,880)	(5,012)
Other comprehensive income		-	(46,296)
Disposal and others(*1)	_	(259,631)	(9,402)
Ending	₩_	163,385	414,988

(*1) The Company owns equity securities of CSN Mineracao S.A. and AJUSTEEL Co., Ltd., which are listed and traded in the active market during the year. Since the quoted price exists at the end of the current period, W250,323 million was moved from Level 3 to Level 1 of the fair value hierarchy.

4) Financial liabilities were recognized in connection with financial guarantee contracts as of December 31, 2021. The details of the amount of guarantees provided are as follows:

(in millions of Won)			Guarantee I	Guarantee amount		
Cuerentes henefisions	Financial institution		Foreign	Won	Foreign	Won
Guarantee beneficiary	Financial institution		currency	equivalent	currency	equivalen
ubsidiaries POSCO Maharashtra	SC	USD	19,784,000	23,454	19,784,000	23,4
Steel Private Limited	SMBC	USD	35,000,000	41,493	35,000,000	41,4
Steern mate Limited	DBS	USD	35,000,000	41,493	35,000,000	41,4
	BNP	USD	30,000,000	35,565	30,000,000	35,5
	Citi	USD	20,000,000	23,710	20,000,000	23,7
POSCO ASSAN TST	SOCIETE GENERALE	USD		49,791		
STEEL INDUSTRY	ING	USD	42,000,000 40,000,000	47,420	37,800,000 36,000,000	44,8 42,6
STEELINDOSTRI	CITI	USD	40,000,000	47,420	36,000,000	42,0
	BNP	USD	24,527,500	29,077	22,074,750	42,0
POSCO Asia Co., Ltd.	Credit Agricole	USD	50,000,000	59,275	22,074,750	20,1
FOSCO ASIa CO., Liu.	Mzuho	USD		59,275	-	
	ING	USD	50,000,000		-	
			50,000,000	59,275	-	
	Shinhan	USD	50,000,000	59,275	25 000 000	20.6
POSCO MEXICO S.A. DE C.V	Citi BANAMEX	USD	30,000,000	35,565	25,000,000	29,6
	BOA	USD	30,000,000	35,565	25,000,000	29,6
	SMBC	USD	20,000,000	23,710	16,666,667	19,7
	MZUHO	USD	20,000,000	23,710	16,666,667	19,7
	ANZ	USD	20,000,000	23,710	16,666,667	19,7
POSCO-VIETNAMCo., Ltd.	SMBC	USD	50,000,000	59,275	35,897,436	42,5
	Credit Agricole	USD	40,000,000	47,420	35,897,436	42,5
	MUFG	USD	26,000,000	30,823	32,307,692	38,3
	Citi	USD	20,000,000	23,710	17,948,718	21,2
	MZUHO	USD	20,000,000	23,710	17,948,718	21,2
PT. KRAKATAU POSCO	Export-Import Bank of Korea	USD	757,000,000	897,424	454,192,580	538,4
	SMBC	USD	290,000,000	343,796	215,332,522	255,2
	BTMU	USD	119,000,000	141,075	54,636,522	64,7
	MZUHO	USD	165,000,000	195,608	108,208,696	128,2
	SCB	USD	107,800,000	127,797	50,548,522	59,9
	Credit Suisse AG	USD	91,000,000	107,881	41,780,870	49,
	HSBC	USD	221,000,000	261,996	171,780,870	203,6
	SC	USD	110,000,000	130,405	110,000,000	130,4
	MUFG	USD	60,000,000	71,130	60,000,000	71,1
	ANZ	USD	103,500,000	122,700	64,800,348	76,8
	BOA	USD	105,000,000	124,478	86,069,565	102,
	The Tokyo Star Bank, Ltd	USD	21,000,000	24,896	9,641,739	11,4
POSCO COATED STEEL	Citi	THB	801,000,000	28,492	731,107,253	26,0
(THAILAND) CO., LTD.	ANZ	THB	1,175,000,000	41,795	1,072,473,187	38,
	MUFG	THB	1,175,000,000	41,795	1,072,473,187	38,
	SC	THB	1,175,000,000	41,795	1,072,473,187	38,
	SMBC	THB	1,175,000,000	41,795	1,072,473,187	38,
Associates						
LLP POSUK Titanium	SMBC	USD	13,500,000	16,004	13,500,000	16,0
Nickel Mning Company SAS	SMBC	EUR	46,000,000	61,748	46,000,000	61,
Joint ventures						
CSP - Compania	Export-Import Bank of Korea	USD	182,000,000	215,761	161,421,800	191,3
Siderurgica do Pecem	Santander	USD	47,600,000	56,430	41,380,600	49,0
	BNP	USD	47,600,000	56,430	41,380,600	49,
	Mzuho	USD	47,600,000	56,430	41,380,600	49,
	Kfw	USD	20,000,000	23,710	15,300,400	18,
	SOCIETE GENERALE	USD	20,000,000	23,710	15,300,400	18,
	Credit Agricole	USD	20,000,000	23,710	17,386,800	20,0
	BBVA Seoul	USD	17,600,000	20,865	17,386,800	20,
	ING	USD	17,600,000	20,865	17,386,800	20,0
	BNDES	BRL	464,060,000	20,865 98,743	464,060,000	
	DINDLO					
		USD	3,346,111,500	3,966,822	2,320,475,785	2,750,9
		EUR	46,000,000	61,748	46,000,000	61,7
		THB	5,501,000,000	195,672	5,021,000,001	178,5
		BRL	464,060,000	98,743	464,060,000	98,

- 5) Finance income and costs by category of financial instrument for the years ended December 31, 2021 and 2020 were as follows:
 - ① For the year ended December 31, 2021

1) December 31, 2021 (in millions of Won)				Fin	ance income and co	sts			_
		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	₩	132,129	-	-	1,913	115,674	-	249,716	-
Financial assets at fair value through other comprehensive income Financial assets measured at		-	89,633		89	-	-	89,722	83,110
amortized cost Financial liabilities at fair value		21,283	-	249,744	-	-	-	271,027	-
through profit or loss Financial liabilities measured at		-	-	(1,218)	(2,626)	161,519	(15,876)	141,799	
amortized cost		(159,192)		(439,967)			6,461	(592,698)	
	₩	(5,780)	89,633	(191,441)	(624)	277,193	(9,415)	159,566	83,110

- (*1) Finance income in the statement of comprehensive income includes the dividends from subsidiaries, associates and joint ventures of W608,959 million for the year ended December 31, 2021.
- (2) For the year ended December 31, 2020

(in millions of Won)				Fina	ince income and cos	ts			Other
		Interest income (expense)	Dividend income(*1)	Gain and loss on foreign currency	Gain and loss on disposal	Impairment loss	Others	Total	comprehensive income (loss)
Financial assets at fair value through profit or loss Financial assets at fair value	₩	155,458		-	(1,582)	(40,816)	-	113,060	-
through other comprehensive income Financial assets measured at		-	36,728	-	-	-	-	36,728	(115,599)
amortized cost Financial liabilities at fair value		43,334		(137,626)	2	-	-	(94,290)	-
through profit or loss Financial liabilities measured at		-	-	-	517	(75,780)	-	(75,263)	-
amortized cost		(220,090)	-	387,406			13,170	180,486	
	₩	(21,298)	36,728	249,780	(1,063)	(116,596)	13,170	160,721	(115,599)

(*1) Finance income in the statement of comprehensive income includes the dividends from subsidiaries, associates and joint ventures of W249,762 million for the year ended December 31, 2020.

(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, 2021 and 2020 are as follows:

(in millions of Won)	_	2021	2020
Cash and cash equivalents	₩	2,042,274	1,822,660
Derivative assets		170,471	18,549
Short-term financial instrument		8,013,857	8,116,381
Debt securities		154,750	159,737
Other securities		71,492	67,161
Other receivables		497,306	274,846
Trade accounts and notes receivable		6,005,022	3,685,573
Deposit instruments		1,436,943	1,337,915
	\mathbf{W}	18,392,115	15,482,822

The Company provided financial guarantee for the repayment of loans of subsidiaries, associates, and joint ventures. As of December 31, 2021 and 2020, the maximum exposure to credit risk caused by financial guarantee amounted to W3,090,014 million and W2,334,064 million, 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, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020
Trade accounts and notes receivable	₩	15,041	15,305
Other accounts receivable		2,330	2,588
Loans		8,817	11,042
	₩	26,188	28,935

② Impairment losses on financial assets for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)	2021 2020		2020
Bad debt expenses	₩	373	3,885

③ The aging and allowance for doubtful accounts of trade accounts and notes receivable as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		202	21	2020			
	-	Trade accounts and notes receivable	Allowance for doubtful accounts	Trade accounts and notes receivable	Allowance for doubtful accounts		
Notdue	₩	5,993,635	725	3,640,063	990		
Over due less than 1 month		3,403	-	13,702	-		
1 month - 3 months		3,326	-	17,241	-		
3 months - 12 months		-	-	8,914	-		
Over 12 months	-	19,699	14,316	20,958	14,315		
	₩	6,020,063	15,041	3,700,878	15,305		

(4) The aging and allowance for doubtful accounts of loans and other account receivable as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		202	21	2020		
	_	Loans and other account receivable	Allowance for doubtful accounts	Loans and other account receivable	Allowance for doubtful accounts	
Not due	₩	460,213	8,817	227,578	8,092	
Over due less than 1 month		243	-	502	-	
1 month - 3 months		10	-	-	-	
3 months - 12 months		59	-	20	10	
Over 12 months		2,382	2,330	5,553	5,528	
	₩	462,907	11,147	233,653	13,630	

(5) Changes in the allowance for doubtful accounts for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)	2021	2020
Beginning W	4 28,935	30,794
Bad debt expenses	373	3,885
Others	(3,120)	(5,744)
Ending 😽	4 26,188	28,935

(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	₩	2,453,068	2,453,068	2,453,068	-	-	-	-
Borrowings		8,202,132	8,596,665	721,824	19,641	1,467,718	6,176,856	210,626
Financial guarantee liabilities(*1)		32,317	3,090,014	3,090,014	-	-	-	-
Lease liabilities		446,575	1,320,058	66,521	10,032	19,227	1,111,333	112,945
Others	-	1,103,840	1,103,836	1,089,945		13,258	633	-
	W	12,237,932	16,563,641	7,421,372	29,673	1,500,203	7,288,822	323,571

(*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

 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, 2021 and 2020 are as follows:

(in millions of Won)		202	1	2020			
		Assets	Liabilities	Assets	Liabilities		
USD	W	2,015,066	4,933,339	1,631,569	4,975,002		
JPY		113,393	12,838	51,445	162,493		
CNY		530,204	187	214,842	137,043		
INR		662,232	-	246,805	-		
EUR		30,277	2,116,332	16,197	669,629		
Others		567,861	50,689	310,531	87,160		
	₩	3,919,033	7,113,385	2,471,389	6,031,327		

 As of December 31, 2021 and 2020, 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, 2021 and 2020 were as follows:

(in millions of Won)		202	21	2020		
	_	10% increase	10% decrease	10% increase	10% decrease	
USD	₩	(291,827)	291,827	(334,343)	334,343	
JPY		10,056	(10,056)	(11,105)	11,105	
CNY		53,002	(53,002)	7,780	(7,780)	
INR		66,223	(66,223)	24,681	(24,681)	
EUR		(208,606)	208,606	(65,343)	65,343	

(e) Interest rate risk

1) The carrying amount of interest-bearing financial instruments as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020
Fixed rate			
Financial assets	\mathbf{W}	11,881,352	11,481,360
Financial liabilities		(7,212,305)	(8,066,588)
	₩	4,669,047	3,414,772
Variable rate			
Financial liabilities	₩	(1,210)	(1,110)

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, 2021 and 2020, 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, 2021 and 2020 were as follows:

(in millions of Won)		2021		202	20
	1	% increase	1% decrease	1% increase	1% decrease
Variable rate financial instruments	₩	(12)	12	(11)	11

23. Share Capital and Capital Surplus

(a) Share capital as of December 31, 2021 and 2020 are as follows:

(in Won, except share information)		2021	2020
Authorized shares		200,000,000	200,000,000
Par value	₩	5,000	5,000
lssued shares(*1)		87,186,835	87,186,835
Shared capital(*2)	₩	482,403,125,000	482,403,125,000

- (*1) As of December 31, 2021, total number of ADRs of 26,067,848 are equivalent to 6,516,962 shares of common stock.
- (*2) As of December 31, 2021, the difference between the ending balance of common stock and the par value of issued common stock is W46,469 million due to retirement of 9,293,790 treasury stocks.

(b) The changes in issued common stock for the years ended December 31, 2021 and 2020 were as follows:

(Share)		2021			2020	
	Issued shares	Treasury shares	Number of outstanding shares	Issued shares	Treasury shares	Number of outstanding shares
Beginning	87,186,835	(11,171,363)	76,015,472	87,186,835	(7,071,194)	80,115,641
Acqusition of treasury shares	-	(389,900)	(389,900)	-	(4,100,169)	(4,100,169)
Disposal of treasury shares	-		-	-		-
Ending	87,186,835	(11,561,263)	75,625,572	87,186,835	(11,171,363)	76,015,472

(c) Capital surplus as of December 31, 2021 and 2020 are as follows:

(in millions of Won)	-	2021	2020
Share premium	₩	463,825	463,825
Gain on disposal of treasury shares		796,623	796,623
Gain from merger		80,628	80,628
Loss on disposal of hybrid bonds	_	(1,787)	(1,787)
	₩.	1,339,289	1,339,289

24. Hybrid Bonds

Hybrid bonds classified as equity as of December 31, 2021 and 2020 are as follows:

(in millions of Won)	Date of issue	Date of maturity	Rate of interest (%)		2021	2020
Hybrid bond 1-2(*1) Issuance cost	2013-06-13	2043-06-13	4.60	_	200,000 (616)	200,000 (616)
				₩	199,384	199,384

(*1) Details of hybrid bonds as of December 31, 2021 are as follows:

	Hybrid bond 1-2
Maturity date	30 years (The Company has a right to extend the maturity date)
Interest rate	lssue date ~ 2023-06-12 : 4.60% Reset every 10 years as follows; · After 10 years : return on government bond of the Republic of Korea (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 10th anniversary of issuance and interest payment date afterwards

The hybrid bond holders' preference in the event of liquidation is senior to the common stockholders, and subordinate to other creditors. The interest accumulated but not paid on the hybrid bonds as of December 31, 2021 amounts to W479 million.

25. Reserves

(a) Reserves as of December 31, 2021 and 2020 are as follows:

(in millions of Won)	_	2021	2020
Changes in fair value of equity investments at fair value through other comprehensive income	₩	(211,849)	(296,626)

(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, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Beginning balance	W	(296,626)	(183,930)
Changes in fair value of equity investments		114,634	(159,446)
Reclassification to profit or loss upon disposal		2,300	4,003
Tax effects		(32,157)	42,747
Ending balance	₩	(211,849)	(296,626)

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, 2021 and 2020 were as follows:

(shares, in millions of Won)	2021		2020	
-	Number of shares	Amount	Number of shares	Amount
Beginning Acqusition of treasury shares Disposal of treasurt shares	11,171,363 ₩ 389,900 -	2,391,523 116,771 -	7,071,194 W 4,100,169 -	1,508,303 883,220 -
Ending	11,561,263 ₩	2,508,294	11,171,363 ₩	2,391,523

The trust contract of acquiring treasury shares contracted during the year ended December 31, 2020 ended on April 12, 2021, upon completion of acquiring treasury share and expiration of contract term.

27. Retained Earnings

(a) Retained earnings as of December 31, 2021 and 2020 are summarized as follows:

(in millions of Won)		2021	2020
Legal reserve	₩	241,202	241,202
Reserve for business rationalization		918,300	918,300
Appropriated retained earnings for business expansion		43,680,500	43,310,500
Unappropriated retained earnings		4,894,490	1,311,775
	₩	49,734,492	45,781,777

(b) Statements of appropriation of retained earnings as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020
Retained earnings before appropriation			
Unappropriated retained earnings			
carried over from prior year	₩	599,210	581,946
Remeasurements of defined benefit plans		32,426	53,816
Loss on disposal of equity securities		(1,667)	(2,902)
Interests of hybrid bonds		(9,200)	(9,225)
Interim dividends		(907,507)	(277,723)
(Dividends (ratio) per share			
₩12,000 (240%) in 2021			
₩3,500 (70%) in 2020)			
Profit for the period		5,181,227	965,863
		4,894,490	1,311,775
Transfer from discretionary reserve			
Appropriated retained earnings for dividends			-
Appropriation of retained earnings		-	-
Dividends		378,128	342,565
(Dividends (ratio) per share			
₩5,000 (100%) in 2021			
₩4,500 (90%) in 2020)			
Appropriated retained earnings			
for business expansion		3,900,000	370,000
		4,278,128	712,565
Unappropriated retained earnings carried			
forward to subsequent year	₩	616,362	599,210

28. Revenue

(a) Details of revenue disaggregated by types of revenue and timing of revenue recognition for the years ended December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020
Types of revenue			
Sales of steel product	₩	38,282,416	25,656,942
Transportation services		1,384,939	687,099
Others		252,846	165,879
	₩	39,920,201	26,509,920
Timing of revenue recognition			
Revenue recognized at a point in time	\mathbf{W}	38,458,289	25,760,905
Revenue recognized over time		1,461,912	749,015
	₩	39,920,201	26,509,920

(b) Details of contract assets and liabilities from contracts with customers as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021	2020	
Receivables				
Account receivables	₩	6,005,022	3,685,573	
Contract assets				
Account receivables		18,161	10,418	
Contract liabilities				
Advance received		24,807	41,901	
Unearned income		63,363	14,855	

29. Selling and Administrative Expenses

(a) Other administrative expenses

Other administrative expenses for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Wages and salaries	\mathbf{W}	274,993	225,665
Expenses related to post-employment benefits		37,268	26,617
Other employee benefits		56,626	53,355
Travel		7,739	8,123
Depreciation		28,789	27,702
Amortization		32,449	45,557
Rental		50,412	50,074
Repairs		9,329	8,414
Advertising		66,088	59,397
Research & development		79,894	66,141
Service fees		191,772	169,615
Supplies		1,246	705
Vehicles maintenance		4,950	4,513
Industry association fee		5,518	5,366
Training		23,790	19,438
Conference		5,100	4,116
Others		35,878	32,828
	₩	911,841	807,626

(b) Selling expenses

Selling expenses for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Freight and custody	₩	119,776	127,988
Operating expenses for distribution center		6,211	6,087
Sales commissions		84,175	96,150
Sales advertising		3,327	1,367
Sales promotion		1,529	1,407
Sample		881	523
Sales insurance premium		6,412	5,851
	₩	222,311	239,373

30. Research and Development Expenditures Recognized as Expenses

Research and development expenditures recognized as expenses for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Selling and administrative expenses	\mathbf{W}	79,894	66,141
Cost of sales		340,409	346,427
	₩	420,303	412,568

31. Finance Income and Costs

Details of finance income and costs for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Finance income			
Interest income(*1)	₩	153,413	198,792
Dividend income		698,592	286,490
Gain on foreign currency transactions		415,244	444,970
Gain on foreign currency translations		71,529	260,189
Gain on valuation of derivatives		263,446	8,814
Gain on transactions of derivatives		20,731	12,437
Others		71,220	18,992
	₩	1,694,175	1,230,684
Finance costs			
Interest expenses		159,192	220,090
Loss on foreign currency transactions		392,031	358,757
Loss on foreign currency translations		286,183	96,622
Loss on valuation of derivatives		3,430	120,398
Loss on transactions of derivatives		23,836	15,892
Others		60,977	8,442
	₩	925,649	820,201

(*1) Interest income calculated using the effective interest method for the years ended December 31, 2021 and 2020 were W21,283 million and W43,334 million, respectively.

32. Other Non-Operating Income and Expenses

Details of other non-operating income and expenses for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Other non-operating income			
Gain on disposals of property, plant and equipment Gain on disposals of investments in subsidiaries,	₩	30,359	12,340
associates and joint ventures		56,121	24,334
Premium income		13,272	23,861
Gain on disposals of assets held for sale		48,018	22,734
Reversal of other provisions		2,052	284
Gain on disposals of emission rights		-	24,566
Others(*1)		77,186	38,429
	₩	227,008	146,548
Other non-operating expenses			
Loss on disposals of property, plant and equipment	₩	111,955	181,454
Impairment loss on property, plant and equipment Impairment loss on investment in subsidiaries,		228,171	27,846
associates and joint ventures		208,732	360,894
Loss on disposals of assets held for sale		-	5,383
Impairment loss on assets held for sale		-	9,093
Donations		45,895	31,989
Impairment loss on intangible assets		7,180	-
Others		59,138	58,176
	₩	661,071	674,835

(*1) During the year ended December 31, 2021, the Company recognized W46,283 million of non-operating income for refund of taxes other than income tax as a result of administrative litigation for tax audits.

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, 2021 and 2020 were as follows (excluding finance costs and income tax expenses):

(in millions of Won)		2021	2020
Changes in inventories(*1)	₩	(1,531,203)	469,872
Raw materials and consumables used		24,376,769	16,222,143
Employee benefits expenses(*3)		2,011,936	1,781,503
Outsourced processing cost		2,685,313	2,380,287
Depreciation(*2)		2,289,507	2,273,633
Amortization		107,465	106,926
Electricity and water expenses		343,581	236,090
Service fees		271,241	262,282
Rental		90,459	87,947
Advertising		66,088	59,397
Freight and custody expenses		1,026,224	742,801
Sales commissions		84,174	96,150
Loss on disposals of property, plant and equipment		111,955	181,454
Impairment loss on property, plant and equipment Impairment loss on investments in subsidiaries,		228,171	27,846
associates and joint ventures		208,732	360,894
Other expenses		1,562,005	759,846
	₩	33,932,417	26,049,071

- (*1) Changes in inventories are the changes in products, semi-finished products and byproducts.
- (*2) Includes depreciation of investment property.
- (*3) The details of employee benefits expenses for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Wages and salaries Expenses related to post-employment benefits	₩	1,846,623 165,313	1,616,721 164,782
	₩	2,011,936	1,781,503

34. Income Taxes

(a) Income tax expense for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Current income taxes(*1)	\overline{W}	1,946,960	283,750
Deferred income taxes		(100,664)	(342,236)
Items credited directly to equity		(43,824)	110,503
Income tax expense	₩	1,802,472	52,017

(*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, 2021 and 2020 were as follows:

(in millions of Won)	_	2021	2020
Changes in fair value of equity investments			
at fair value through other comprehensive income(*1)	₩	(31,525)	43,847
Remeasurements of defined benefit plans(*1)		(12,299)	(20,413)
Gain on combination			87,069
	₩	(43,824)	110,503

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

(c) The calculated income tax expense based on statutory rate to the actual amount of taxes recorded by the Company for the years ended December 31, 2021, and 2020 were as follows :

(in millions of Won)		2021	2020
Profit before income tax expense	₩	6,983,700	1,017,880
Income tax expense computed at statutory rate		1,910,155	269,555
Adjustments:			
Tax credit		(191,183)	(60,466)
Refund of taxes for prior years		(20,654)	(21,277)
Investment in subsidiaries,			
associates and joint ventures		57,772	108,842
Tax effect due to permanent differences		36,927	(3,252)
Others(*1)		9,455	(241,385)
		(107,683)	(217,538)
Income tax expense	₩	1,802,472	52,017
Effective tax rate (%)		25.8%	5.1%

- (*1) During the year ended December 31, 2020, there was the effect of income tax due to changes estimates of the recoverability of temporary differences related to impairment loss of Synthetic Natural Gas (SNG) facilities recognized in 2018.
- (d) The movements in deferred tax assets (liabilities) for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)			2021		2020			
	-	December 31, 2020	Increase (decrease)	December 31, 2021	December 31, 2019	Increase (decrease)	December 31, 2020	
Deferred income tax due to	-							
temporary differences								
Reserve for special repairs	₩	(10,856)	10,820	(36)	(11,014)	158	(10,856)	
PPE - Depreciation		10,160	479	10,639	5,400	4,760	10,160	
Impairment loss on investments		92,427	(2,278)	90,149	128,088	(35,661)	92,427	
Prepaid expenses		19,738	(135)	19,603	15,118	4,620	19,738	
PPE - Revaluation		(1,747,944)	117,484	(1,630,460)	(1,830,793)	82,849	(1,747,944)	
Gain or loss on foreign currency translation		(47,468)	48,534	1,066	10,771	(58,239)	(47,468)	
Defined benefit liabilities		(134,470)	18,410	(116,060)	(138,943)	4,473	(134,470)	
Accrued revenue		(10,632)	3,813	(6,819)	(12,274)	1,642	(10,632)	
PPE - Impairment loss		383,308	62,022	445,330	137,326	245,982	383,308	
Others		355,832	(104,575)	251,257	284,345	71,487	355,832	
	-	(1,089,905)	154,574	(935,331)	(1,411,976)	322,071	(1,089,905)	
Deferred tax from deficit and tax credit	-							
Deficit carried over	-	9,454	(9,454)		11,623	(2,169)	9,454	
Deferred income taxes								
recognized directly to equity								
Net changes in fair value of equity investments								
at fair value through other comprehensive income		112,513	(32,157)	80,356	69,766	42,747	112,513	
Remeasurements of defined benefit plans		119,621	(12,299)	107,322	140,034	(20,413)	119,621	
	-	232,134	(44,456)	187,678	209,800	22,334	232,134	
	₩	(848,317)	100,664	(747,653)	(1,190,553)	342,236	(848,317)	

(e) Deferred tax assets (liabilities) as of December 31, 2021 and 2020 are as follows:

(in millions of Won)		2021			2020			
	-	Assets	Liabilities	Net	Assets	Liabilities	Net	
Deferred income tax due to								
temporary differences								
Reserve for special repairs	₩	-	(36)	(36)	-	(10,856)	(10,856)	
PPE - Depreciation		17,386	(6,747)	10,639	17,810	(7,650)	10,160	
Impairment loss on investments		90,149	-	90,149	92,427	-	92,427	
Prepaid expenses		19,603	-	19,603	19,738	-	19,738	
PPE - Revaluation		-	(1,630,460)	(1,630,460)	-	(1,747,944)	(1,747,944	
Gain or loss on foreign currency translation		87,242	(86,176)	1,066	100,518	(147,986)	(47,468)	
Defined benefit liabilities		258,686	(374,746)	(116,060)	254,678	(389,148)	(134,470	
Accrued revenue		-	(6,819)	(6,819)	-	(10,632)	(10,632)	
PPE - Impairment loss		445,330	-	445,330	383,308	-	383,308	
Others		473,910	(222,653)	251,257	511,690	(155,858)	355,832	
	_	1,392,306	(2,327,637)	(935,331)	1,380,169	(2,470,074)	(1,089,905	
Deferred tax from deficit and tax credit								
Deficit carried over	-	-			9,454		9,454	
Deferred income taxes								
recognized directly to equity								
Net changes in fair value of equity investments								
at fair value through other comprehensive income		98,582	(18,226)	80,356	121,564	(9,051)	112,513	
Remeasurements of defined benefit plans	_	107,322	-	107,322	119,621	-	119,621	
		205,904	(18,226)	187,678	241,185	(9,051)	232,134	
	₩	1,598,210	(2,345,863)	(747,653)	1,630,808	(2,479,125)	(848,317)	

As of December 31, 2021, deductible temporary differences of W1,447,566 million related to impairment losses on investments in subsidiaries, associates and joint ventures were not recognized as deferred tax assets, because it is not probable they will reverse in the foreseeable future.

(f) The Company recognized current tax payable or receivable at the amount expected to be paid or received that reflects uncertainly related to income taxes.

35. Earnings Per Share

(a) Basic earnings per share for the years ended December 31, 2021 and 2020 were as follows:

(in Won, except share information)		2021	2020
Profit for the period Interests of hybrid bonds, net of tax	₩	5,181,227,349,434 (6,669,999,999)	965,863,440,351 (6,688,273,972)
Weighted-average number of common shares outstanding(*1)		75,696,150	79,120,963
Basic earnings per share	₩	68,360	12,123

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

(shares)	2021	2020
Total number of common shares issued Weighted-average number of treasury shares	87,186,835 (11,490,685)	87,186,835 (8,065,872)
Weighted-average number of common shares outstanding	75,696,150	79,120,963

(b) Diluted earnings per share for the years ended December 31, 2021 and 2020 were as follows:

(in Won, except share information)		2021	2020
Profit for the period Interests of hybrid bonds, net of tax	₩	5,181,227,349,434 (6,669,999,999)	965,863,440,351 (6,688,273,972)
Gain or loss from exchange rate on and revaluation of exchangeable bonds		(63,166,690,813)	-
Adjusted weighted-average number of common shares(*1)		76,688,340	79,120,963
Diluted earnings per share	₩	66,651	12,123

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

(shares)	2021	2020
Weighted-average number of common shares outstanding	75,696,150	79,120,963
Weighted-average number of potential common share	992,190	-
Adjusted weighted-average number of common shares	76,688,340	79,120,963

The Company holds exchangeable bonds as potential common stocks with a diluting effect as of December 31, 2021. Meanwhile, since there were no potential shares of common stock which had dilutive effects as of December 31, 2020, 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, 2021 and 2020 were as follows:
 - 1) For the year ended December 31, 2021

(in millions of Won)	Sales and oth	ners(*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.	₩ 5,859	11,113		491,624	158	32,328
POSCO COATED & COLOR STEEL Co., Ltd.	695,451	2,602			39,014	627
POSCO ICT(*4)	1,605	4,996		324,275	46,037	181,221
eNtoB Corporation	14	-	381,633	65,254	115	25,242
POSCO CHEMICAL CO., LTD	318,808	31,917	462,013	14,358	298,431	3,724
POSCO ENERGY CO., LTD. POSCO MOBILITY SOLUTION	5,207	1,450	11,271	-	-	26,137
(formerly, POSCO SPS CORPORATION)	807,925	-			45,758	914
POSCO INTERNATIONAL Corporation	9,750,636	54,331	1,299,561		988	8,968
POSCO Thainox Public Company Limited	309,295		-	-		69
POSCO Canada Ltd.	-	1,372	202,523		-	
POSCO Asia Co., Ltd.	19,142	426	417	-		1,648
Qingdao Pohang Stainless Steel Co., Ltd.	188,470	8			-	83
POSCO JAPAN Co., Ltd.	1,613,634	1	27,937	1,726		4,894
POSCO-VIETNAM Co., Ltd.	441,758	975			-	46
POSCO MEXICO S.A. DE C.V.	460,773	548		-		1,494
POSCO Maharashtra Steel Private Limited	899,675	903	-		-	229
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	161,808			-		2
POSCO VST CO., LTD.	201,517				-	20
POSCO INTERNATIONAL SINGAPORE PTE LTD.	-	1,453	1,704,193			
POSCO ASSAN TST STEEL INDUSTRY	278,749	734	8		-	24
Others	1,337,458	56,161	220,000	63,116	276,202	153,677
	17,497,784	168,990	4,309,556	960,353	706,703	441,347
Associates and joint ventures(*3)						
SNNC	72,797	2,514	736,441		-	107
POSCO-SAMSUNG-Slovakia Processing Center	72,342	-			-	
Roy Hill Holdings Pty Ltd	-	418,044	2,338,625			
Others	37,410	63,298	107,637			49,741
	182,549	483,856	3,182,703		<u> </u>	49,848
,	₩17,680,333	652,846	7,492,259	960,353	706,703	491,195

- (*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, 2021, the Company provided guarantees to related parties (Note 22).
- (*4) Others (purchase) mainly consist of service fees related to maintenance and repair of ERP System.

2) For the year ended December 31, 2020

(in millions of Won)	Sales and o	others	Purchase and others				
	Sales	Others	Purchase of material	Purchase of fixed assets	Outsourced processing cost	Others	
Subsidiaries							
POSCO ENGINEERING & CONSTRUCTION CO., LTD. ¥	6,790	11,123	15	772,846	220	63,46	
POSCO COATED & COLOR STEEL Co., Ltd.	418,619	1,820			28,523	63	
POSCO ICT	2,747	4,996		374,914	41,384	181,55	
eNtoB Corporation	15	60	214,750	34,217	76	25,87	
POSCO CHEMICAL CO., LTD	258,154	34,944	456,780	23,003	304,135	4,81	
POSCO ENERGY CO., LTD.	1,262	2,396	14,011	3	· · · ·	23,33	
POSCO MOBILITY SOLUTION							
(formerly, POSCO SPS CORPORATION)	381,591			-	32,325	1,50	
POSCO INTERNATIONAL Corporation	5,644,017	56,322	342,520	-	11,371	4,37	
POSCO Thainox Public Company Limited	311,924	137	2,538				
POSCO Canada Ltd.	-	1,325	162,385		-		
POSCO Asia Co., Ltd.	1,514,154	1,060	151,373	4,331	1,508	3,91	
Qingdao Pohang Stainless Steel Co., Ltd.	145,006	66		-	-	30	
POSCO JAPAN Co., Ltd.	1,076,987		37,210	5,277		6,22	
POSCO-VIETNAM Co., Ltd.	253,060	605			-	9	
POSCO MEXICO S.A. DE C.V.	168,188	403			-	2,00	
POSCO Maharashtra Steel Private Limited	328,943	2,507			-	47	
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	112,925		-	-			
POSCO VST CO., LTD.	208,464	218	-	-		15	
POSCO INTERNATIONAL SINGAPORE PTE LTD.	-		600,580		-		
POSCO ASSAN TST STEEL INDUSTRY	264,786	948	2,314		-	1	
Others	806,672	22,069	71,261	45,695	238,496	135,42	
	11,904,304	140,999	2,055,737	1,260,286	658,038	454,18	
Associates and joint ventures							
SNNC	5,651	4.739	545.001		-		
POSCO-SAMSUNG-Slovakia Processing Center	40,512	-		-			
Roy Hill Holdings Pty Ltd	-	91,188	1,300,296	-			
Others	34,620	69,151	64,861	84,839	4,086	44,06	
	80,783	165,078	1,910,158	84,839	4,086	44,06	
10	4 11.985.087	306.077	3.965.895	1.345.125	662.124	498.24	

(b) The related account balances of significant transactions with related companies as of December 31, 2021 and 2020 are as follows:

1) December 31, 2021

(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.	₩ 5,692	10	5,702	-	97,007	507	97,514
POSCO COATED & COLOR STEEL Co., Ltd.	95,001	-	95,001	-	154	5,082	5,236
POSCO ICT	221	3	224	3,736	155,064	27,562	186,362
eNtoB Corporation	-	-	-	1,683	23,851	-	25,534
POSCO CHEMICAL CO., LTD	35,895	3,664	39,559	12,969	57,498	17,990	88,457
POSCO ENERGY CO., LTD.	1,485	292	1,777	-	6,169	10,066	16,235
POSCO MOBILITY SOLUTION							
(formerly, POSCO SPS CORPORATION)	133.608	-	133,608	71	2.232	5.104	7.407
POSCO INTERNATIONAL Corporation	1.279.463	4	1,279,467	4.831	483	502	5.816
POSCO Thainox Public Company Limited	54,804	-	54,804	-	-	-	-
Qingdao Pohang Stainless Steel Co., Ltd.	35,423	-	35,423	-	83	-	83
POSCO MEXICO S.A. DE C.V.	179,428	251	179,679	-	-	-	-
POSCO Maharashtra Steel Private Limited	530,693	1,048	531,741	-	-	-	-
POSCO INTERNATIONAL SINGAPORE PTE LTD.	-	14	14	169,565	90	-	169,655
POSCO ASSAN TST STEEL INDUSTRY	220,481	951	221,432	-	-	-	-
Others	368,252	21,761	390,013	22,583	48,274	84,778	155,635
	2,940,446	27,998	2,968,444	215,438	390,905	151,591	757,934
Associates and joint ventures							
SNNC	420	65	485	52,396	-	-	52,396
Roy Hill Holdings Pty Ltd	-	34,356	34,356	436,774	-	-	436,774
FQM Australia Holdings Pty Ltd(*1)	-	181,122	181,122	-			
Others	168,167	15,895	184,062	5,549	187	-	5,736
	168,587	231,438	400,025	494,719	187	-	494,906
	₩ 3,109,033	259,436	3,368,469	710,157	391,092	151,591	1,252,840

(*1) It includes W177,825 million in acquisition of First Quantum Minerals Ltd. loans under the agreement for the purpose of investing nickel mines in Australia during the year ended December, 31, 2021.

2) December 31, 2020

(in millions of Won)	I	Receivables		Payables			
	Trade accounts and notes receivable	Others	Total	Trade accounts and notes payable	Accounts payable	Others	Total
Subsidiaries							
POSCO ENGINEERING & CONSTRUCTION CO., LTD. ₽	₩ 6,010	11	6,021	-	81,608	394	82,002
POSCO COATED & COLOR STEEL Co., Ltd.	63,520	-	63,520	-	180	3,709	3,889
POSCO ICT	245	1	246	2,820	118,720	31,411	152,951
eNtoB Corporation	-	-	-	1,361	35,846	18	37,225
POSCO CHEMICAL CO., LTD	19,406	3,434	22,840	13,066	55,515	18,531	87,112
POSCO ENERGY CO., LTD.	261	122	383	-	2,995	12,508	15,503
POSCO MOBILITY SOLUTION							
(formerly, POSCO SPS CORPORATION)	72,009	-	72,009	-	2,352	4,175	6,527
POSCO INTERNATIONAL Corporation	534,531	-	534,531	2,713	-	-	2,713
POSCO Thainox Public Company Limited	39,920	-	39,920	-	-	-	-
Qingdao Pohang Stainless Steel Co., Ltd.	25,838	-	25,838	-	-	-	-
POSCO MEXICO S.A. DE C.V.	71,307	397	71,704	-	-	-	-
POSCO Maharashtra Steel Private Limited	173,285	2,006	175,291	-	-	-	-
POSCO INTERNATIONAL SINGAPORE PTE LTD.	-	13	13	42,596	-	-	42,596
POSCO ASSAN TST STEEL INDUSTRY	258,563	1,845	260,408	-	-	-	-
Others	467,135	29,002	496,137	2,926	30,691	82,716	116,333
	1,732,030	36,831	1,768,861	65,482	327,907	153,462	546,851
Associates and joint ventures							
SNNC	106	228	334	33,380	-	-	33,380
Roy Hill Holdings Pty Ltd	-	52,076	52,076	201,924	-	-	201,924
Others	818	17,882	18,700	6,704	<u> </u>	<u> </u>	6,704
	924	70,186	71,110	242,008			242,008
¥	¥ <u>1,732,954</u>	107,017	1,839,971	307,490	327,907	153,462	788,859

(c) For the years ended December 31, 2021 and 2020, details of compensation to key management officers were as follows:

(in millions of Won)		2021	2020
Short-term benefits	₩	44,317	41,693
Long-term benefits		6,104	4,212
Retirement benefits		14,626	8,261
	₩	65,047	54,166

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

- 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, 2021, 32 million tons of iron ore and 5 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, 2021, there are 37 vessels under contract and the average remaining contract period is about 9 years.
- 4) As of December 31, 2021, 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, 2021, 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 has deposited 2,980,162 treasury shares for exchange with the Korea Securities Depository in relation to foreign currency exchangeable bonds as of December 31, 2021.
- (c) As of December 31, 2021, 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 36 lawsuits, claim for employee right aggregating to W1,404 billion as defendant as of December 31, 2021, which arise from the ordinary course of business. 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, 2021.

38. Statements of Cash Flows

(a) Changes in operating assets and liabilities for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)		2021	2020
Trade accounts and notes receivable, net	₩	(2,317,361)	253,745
Other accounts receivable		(289,356)	110,385
Inventories		(3,522,757)	904,970
Accrued revenue		17,294	-
Prepaid expenses		367	(4,435)
Other current assets		(13,142)	(3,014)
Long-term guarantee deposits		(182)	(440)
Derivative assets		632	9,719
Other non-current assets		(27,403)	1,631
Trade accounts and notes payable		1,192,693	600,622
Other accounts payable		55,248	(4,358)
Accrued expenses		70,061	(27,008)
Advances received		4,678	1,083
Withholdings		36,282	(82,221)
Unearned revenue		44,490	(9,071)
Other current liabilities		(37,648)	(24,323)
Derivative liabliities		17,136	11,295
Payments of severance benefits		(144,929)	(137,189)
Plan assets		(67,250)	(45,421)
Other non-current liabilities		783	(5,931)
	₩	(4,980,364)	1,550,039

- (b) Changes in liabilities arising from financial activities for the years ended December 31, 2021 and 2020 were as follows:
 - 1) December 31, 2021

(in millions of Won)							
	_	Short-term borrowings	Long-term borrowings	Dividend payable	Lease liabilities	Long-term financial liabilities	Derivatives that hedge long-term borrowings
Beginning	₩	1,029,363	6,725,973	1,854	312,362	12,249	127,017
Changes from financing cash flows		(360,489)	641,203	(1,257,889)	(46,756)	78	(9,103)
The effect of changes in foreign exchange rates		3,429	205,810	-	17,553	-	-
Changes in fair values		-	(54,057)	-	-	-	(237,970)
Other changes:							
Decrease in retained earnings		-	-	1,259,272	-	-	
Interest expense		-	10,900		22	-	
Increase in lease assets	_	-			163,394		
Ending	₩_	672,303	7,529,829	3,237	446,575	12,327	(120,056)

2) December 31, 2020

(in millions of Won)							
	_	Short-term borrowings	Long-term borrowings	Dividend payable	Lease liabilities	Long-term financial liabilities	Derivatives that hedge long-term borrowings
Beginning	₩	167,021	6,170,991	2,296	256,971	12,685	10,083
Changes from financing cash flows		884,768	739,913	(607,853)	(63,684)	(436)	5,873
The effect of changes in foreign exchange r	ates	(22,426)	(197,679)	-	(5,512)	-	
Changes in fair values				-	-	-	111,061
Other changes:							
Decrease in retained earnings				607,411	-	-	
Interest expense			12,748	-	10	-	
Increase in lease assets	_	<u> </u>			124,577		
Ending	₩	1,029,363	6,725,973	1,854	312,362	12,249	127,017

39. Events after the Reporting Period

- (a) On January 1, 2022, the Company transferred its logistics division to POSCO-Terminal Co., Ltd. for the purpose of creating synergy in the group's logistics business.
- (b) Pursuant to board of directors meeting resolution on December 10, 2021 and approval in the Extraordinary General Meeting of Shareholders on January 28, 2022, POSCO decided to, by way of a vertical spin-off, transform to a holding company under the new name of POSCO HOLDINGS INC. (tentative). The purpose of the spin-off is to establish corporate governance to seek long-term balanced growth of the group businesses. The spin-off date is March 1, 2022, and as a result of the spin-off, assets and liabilities transferred to the newly established company through spin-off including two steel plants (Pohang and Gwangyang) are expected to decrease and the investments in subsidiaries corresponding to the net asset value is expected to increase.

Notice to Readers

This report is annexed in relation to the audit of the separate financial statements as of December 31, 2021 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.

Independent Auditors' Report on Internal Control over Financial Reporting

English Translation of a Report Originally Issued in Korean

To the Shareholders and Board of Directors of POSCO HOLDINGS INC. (formerly, POSCO):

Opinion on Internal Control over Financial Reporting

We have audited POSCO HOLDINGS INC's (formerly, POSCO, the "Company") internal control over financial reporting ("ICFR") as of December 31, 2021 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, 2021, 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 statements of financial position as of December 31, 2021 and 2020, 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, and our report dated March 10, 2022 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 Se Hong Choi.

(CPMG Samjong Accounting Corp.

Seoul, Korea March 10, 2022

This report is effective as of March 10, 2022, 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, 2021.

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, 2021, in all material respects, in accordance with the'Guidelines for Internal Control over Financial Reporting'.

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 28, 2022

JW. choi

Choi, Jeong-Woo, Chief Executive Officer

Tinge Chu

Chon, Jung-Son, Internal Control Officer