

POSCO HOLDINGS INC.
(Formerly, POSCO)
and Subsidiaries

Consolidated Financial Statements
December 31, 2021 and 2020

(With Independent Auditors' Report Thereon)

Table of Contents

	Page
Independent Auditors' Report	1
Consolidated Financial Statements	
Consolidated Statements of Financial Position.....	7
Consolidated Statements of Comprehensive Income	9
Consolidated Statements of Changes in Equity	10
Consolidated Statements of Cash Flows	12
Notes to the Consolidated Financial Statements	14

Independent Auditors' Report

Based on a report originally issued in Korean

The Board of Directors and Shareholders
POSCO HOLDINGS INC.:

Opinion

We have audited the consolidated financial statements of POSCO HOLDINGS INC. (formerly, POSCO) and its subsidiaries (the "Company"), which comprise the consolidated statements of financial position as of December 31, 2021 and 2020, the consolidated 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 consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2021 and 2020, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

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 Consolidated 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 consolidated 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 41 to the consolidated 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

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements as of and for the year ended December 31, 2021. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

(a) Assessment of goodwill impairment in the POSCO INTERNATIONAL Corporation cash generating unit

As described in note 15(c) to the consolidated financial statements, goodwill amounted to ₩735,969 million as of December 31, 2021, which includes goodwill allocated to the cash generating unit ("CGU") of POSCO INTERNATIONAL Corporation in the amount of ₩578,046 million. The Company recognized impairment loss on goodwill allocated to the CGU of POSCO INTERNATIONAL Corporation of ₩184,770 million during the year ended December 31, 2021.

The Company performed goodwill impairment test for POSCO INTERNATIONAL Corporation CGU by estimating its value-in-use. 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 that have significant impacts on the estimated value-in-use. Considering significant degree of judgment in estimating value-in-use and the likelihood of existence of management bias, we identified assessment of goodwill impairment related to POSCO INTERNATIONAL Corporation CGU 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 goodwill impairment assessment process;
- Evaluating the key assumptions (including estimated sales) used to determine the value-in-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 rate by comparison with observable market information
- Performing sensitivity analysis on the discount rate, terminal growth rate and estimated sales applied to assess the impact of changes in these key assumptions on the results of management's impairment assessment; and
- Engaging our valuation specialists to assist us in evaluating the discount rate used in the valuation by comparing it against a discount rate that was independently developed using observable information.

(b) Estimation of percentage-of-completion by the input method

As described in notes 3 (“Construction work in progress” and “Revenue from contracts with customers”), 28 and 29 to the consolidated financial statements, revenue from construction contract amounted to ₩6,263,778 million, which was approximately 8.2% of consolidated sales for the year ended December 31, 2021. Such revenue is primarily related to POSCO ENGINEERING & CONSTRUCTION CO., LTD., a subsidiary of the Company. In connection with the Company’s production-to-order revenue transactions, when the outcome of a construction contract can be estimated reliably, the Company recognizes contract revenues and contract costs over time based on the percentage-of-completion method. The percentage-of-completion is calculated based on the ratio of contract costs incurred for work performed to date excluding costs incurred that do not contribute to the progress in satisfying the Company’s performance obligation over the estimated total contract costs.

Construction contracts generally have a long-term duration, and the total contract costs are estimated based on estimated future expenditures for materials, labor, outsourced services and others which are expected to be incurred during the construction period. Considering the impact on revenue recognition from the uncertainty in connection with the long-term contracts and changes in estimated costs, we identified estimation of percentage-of-completion by the input method 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 estimation and review on the estimated total contract costs, and review on construction costs incurred and cost allocation to the projects;
- Inspecting the documents prepared by the person in charge of construction field regarding rationale and reliability of the estimated total contract costs for major construction projects;
- Inquiring and inspecting the documents regarding rationale and reliability of the estimates such as material costs, labor costs and outsourcing costs included in the estimated total contract costs on the new major-construction projects;
- Inquiring the person in charge of construction field and inspecting documents as to the cause of significant changes in total contract cost for contracts with such changes;
- Inquiring the person in charge of construction field and inspecting documents as to the cause of significant differences between estimated total cost and the actual total cost for completed projects; and
- For selected samples, testing the cut-off and assessing whether contract costs incurred that are used for calculation of percentage-of-completion through inspection of supporting documentation.

Other Matter

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

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

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

In preparing the consolidated 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 Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an 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 consolidated 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 consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.

- Evaluate the appropriateness of accounting policies used in the preparation of the consolidated 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 consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our 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 consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

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

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

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

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

KPMG 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 consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Consolidated 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	4,5,23 ₩	4,775,166	4,754,644
Trade accounts and notes receivable, net	6,17,23,29,37	10,061,982	8,120,619
Other receivables, net	7,23,37	2,104,610	1,494,239
Other short-term financial assets	8,23	13,447,717	11,709,209
Inventories	9	15,215,098	9,051,790
Current income tax assets	35	23,229	49,481
Assets held for sale	10	78,470	34,210
Other current assets	16	915,358	616,623
Total current assets		46,621,630	35,830,815
Long-term trade accounts and notes receivable, net	6,23	63,205	86,423
Other receivables, net	7,23,37	1,415,143	1,195,962
Other long-term financial assets	8,23	2,119,674	1,561,807
Investments in associates and joint ventures	11	4,514,647	3,876,249
Investment property, net	13	1,086,077	994,781
Property, plant and equipment, net	14,33	29,596,698	29,400,141
Intangible assets, net	15,33	4,166,309	4,449,432
Defined benefit assets, net	21	255,858	86,149
Deferred tax assets	35	1,433,766	1,335,154
Other non-current assets	16	198,607	270,060
Total non-current assets		44,849,984	43,256,158
Total assets		₩ 91,471,614	79,086,973

See accompanying notes to the consolidated financial statements

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Consolidated 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	23,37 ₩	5,468,175	3,755,513
Short-term borrowings and current installments of long-term borrowings	4,17,23	8,830,067	8,677,529
Other payables	18,23	2,189,361	1,845,266
Other short-term financial liabilities	19,23,37	111,641	141,404
Current income tax liabilities	35	2,139,718	366,476
Liabilities directly associated with the assets held for sale		189	25
Provisions	20	399,984	443,273
Other current liabilities	22,29	1,944,488	1,625,482
Total current liabilities		21,083,623	16,854,968
Long-term trade accounts and notes payable	23,37	694	22,323
Long-term borrowings, excluding current installments	4,17,23	12,911,149	11,820,078
Other payables	18,23	679,009	558,924
Other long-term financial liabilities	19,23	23,996	133,588
Defined benefit liabilities, net	21	50,842	141,785
Deferred tax liabilities	35	1,271,775	1,320,726
Long-term provisions	20	589,092	522,969
Other non-current liabilities	22	56,491	37,020
Total non-current liabilities		15,583,048	14,557,413
Total liabilities		36,666,671	31,412,381
Equity			
Share capital	24	482,403	482,403
Capital surplus	24	1,387,960	1,310,547
Hybrid bonds	25	199,384	199,384
Reserves	26	(666,985)	(1,380,918)
Treasury shares	27	(2,508,294)	(2,391,523)
Retained earnings		51,532,887	46,111,457
Equity attributable to owners of the controlling company		50,427,355	44,331,350
Non-controlling interests	25	4,377,588	3,343,242
Total equity		54,804,943	47,674,592
Total liabilities and equity	₩	91,471,614	79,086,973

See accompanying notes to the consolidated financial statements.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Consolidated Statements of Comprehensive Income

For the years ended December 31, 2021 and 2020

(in millions of Won, except per share information)

	Notes	2021	2020
Revenue	28,29,37	₩ 76,332,345	57,792,796
Cost of sales	29,31,34,37	(64,451,219)	(53,072,390)
Gross profit		11,881,126	4,720,406
Selling and administrative expenses	30,34		
Impairment loss on trade accounts and notes receivable	23	(40,153)	(829)
Other administrative expenses	31	(2,209,809)	(1,939,602)
Selling expenses		(393,075)	(376,940)
Operating profit		9,238,089	2,403,035
Share of profit of equity-accounted investees, net	11	649,569	133,297
Finance income and costs	23,32		
Finance income		2,730,110	2,677,499
Finance costs		(2,765,175)	(2,892,402)
Other non-operating income and expenses	33		
Reversal of (impairment loss) on other receivables	23	12,975	(53,105)
Other non-operating income		577,997	402,336
Other non-operating expenses	34	(1,027,492)	(645,574)
Profit before income tax		9,416,073	2,025,086
Income tax expense	35	(2,220,183)	(236,934)
Profit		7,195,890	1,788,152
Other comprehensive income (loss)			
Items that will not be reclassified subsequently to profit or loss:			
Remeasurements of defined benefit plans	21	51,155	36,575
Net changes in fair value of equity investments at fair value through other comprehensive income	23	214,888	(77,627)
Items that are or may be reclassified subsequently to profit or loss:			
Capital adjustment arising from investments in equity-accounted investees		165,106	(28,609)
Foreign currency translation differences		386,141	(147,956)
Gains or losses on valuation of derivatives	23	309	(331)
Other comprehensive income (loss), net of tax		817,599	(217,948)
Total comprehensive income		₩ 8,013,489	1,570,204
Profit attributable to:			
Owners of the controlling company		₩ 6,617,239	1,602,148
Non-controlling interests		578,651	186,004
Profit		₩ 7,195,890	1,788,152
Total comprehensive income attributable to:			
Owners of the controlling company		₩ 7,384,571	1,415,132
Non-controlling interests		628,918	155,072
Total comprehensive income		₩ 8,013,489	1,570,204
Earnings per share (in Won)	36		
Basic earnings per share (in Won)		87,330	20,165
Diluted earnings per share (in Won)		₩ 85,377	20,165

See accompanying notes to the consolidated financial statements.

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

(in millions of Won)

	Attributable to owners of the controlling company							Non-	Total
	Share capital	Capital surplus	Hybrid bonds	Reserves	Treasury shares	Retained earnings	Subtotal	controlling interests	
Balance as of January 1, 2020	₩ 482,403	1,376,251	199,384	(1,157,980)	(1,508,303)	45,080,117	44,471,872	3,322,835	47,794,707
Comprehensive income:									
Profit	-	-	-	-	-	1,602,147	1,602,147	186,005	1,788,152
Other comprehensive income (loss)									
Remeasurements of defined benefit plans, net of tax	-	-	-	-	-	44,704	44,704	(8,129)	36,575
Capital adjustment arising from investments in equity-accounted investees, net of tax	-	-	-	(16,760)	-	-	(16,760)	(11,849)	(28,609)
Net changes in fair value of equity investments at fair value through other comprehensive income, net of tax	-	-	-	(74,210)	-	(3,417)	(77,627)	-	(77,627)
Foreign currency translation differences, net of tax	-	-	-	(137,071)	-	-	(137,071)	(10,885)	(147,956)
Gains or losses on valuation of derivatives, net of tax	-	-	-	(261)	-	-	(261)	(70)	(331)
Total comprehensive income	-	-	-	(228,302)	-	1,643,434	1,415,132	155,072	1,570,204
Transactions with owners of the controlling company, recognized directly in equity:									
Year-end dividends	-	-	-	-	-	(320,462)	(320,462)	(60,517)	(380,979)
Interim dividends	-	-	-	-	-	(277,723)	(277,723)	-	(277,723)
Changes in subsidiaries	-	-	-	-	-	-	-	22,303	22,303
Changes in ownership interest in subsidiaries	-	(27,716)	-	-	-	-	(27,716)	162,674	134,958
Repayment of redeemable convertible preferred shares	-	(33,581)	-	-	-	-	(33,581)	(245,000)	(278,581)
Interest of hybrid bonds	-	-	-	-	-	(9,225)	(9,225)	(7,354)	(16,579)
Acquisition of treasury shares	-	-	-	-	(883,220)	-	(883,220)	-	(883,220)
Others	-	(4,407)	-	5,364	-	(4,684)	(3,727)	(6,771)	(10,498)
Total transactions with owners of the controlling company	-	(65,704)	-	5,364	(883,220)	(612,094)	(1,555,654)	(134,665)	(1,690,319)
Balance as of December 31, 2020	₩ 482,403	1,310,547	199,384	(1,380,918)	(2,391,523)	46,111,457	44,331,350	3,343,242	47,674,592

See accompanying notes to the consolidated financial statements.

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

(in millions of Won)

	Attributable to owners of the controlling company							Non-controlling interests	Total
	Share capital	Capital surplus	Hybrid bonds	Reserves	Treasury shares	Retained earnings	Subtotal		
Balance as of January 1, 2021	₩ 482,403	1,310,547	199,384	(1,380,918)	(2,391,523)	46,111,457	44,331,350	3,343,242	47,674,592
Comprehensive income:									
Profit	-	-	-	-	-	6,617,239	6,617,239	578,651	7,195,890
Other comprehensive income (loss)									
Remeasurements of defined benefit plans, net of tax	-	-	-	-	-	44,405	44,405	6,749	51,154
Capital adjustment arising from investments in equity-accounted investees, net of tax	-	-	-	160,343	-	-	160,343	4,764	165,107
Net changes in fair value of equity investments at fair value through other comprehensive income, net of tax	-	-	-	205,924	-	8,948	214,872	16	214,888
Foreign currency translation differences, net of tax	-	-	-	347,469	-	-	347,469	38,672	386,141
Gains or losses on valuation of derivatives, net of tax	-	-	-	243	-	-	243	66	309
Total comprehensive income	-	-	-	713,979	-	6,670,592	7,384,571	628,918	8,013,489
Transactions with owners of the controlling company, recognized directly in equity:									
Year-end dividends	-	-	-	-	-	(342,565)	(342,565)	(62,230)	(404,795)
Interim dividends	-	-	-	-	-	(907,507)	(907,507)	-	(907,507)
Changes in subsidiaries	-	-	-	-	-	-	-	15,034	15,034
Changes in ownership interest in subsidiaries	-	83,547	-	-	-	-	83,547	459,917	543,464
Interest of hybrid bonds	-	-	-	-	-	(9,200)	(9,200)	(7,254)	(16,454)
Acquisition of treasury shares	-	-	-	-	(116,771)	-	(116,771)	-	(116,771)
Others	-	(6,134)	-	(46)	-	10,110	3,930	(39)	3,891
Total transactions with owners of the controlling company	-	77,413	-	(46)	(116,771)	(1,249,162)	(1,288,566)	405,428	(883,138)
Balance as of December 31, 2021	₩ 482,403	1,387,960	199,384	(666,985)	(2,508,294)	51,532,887	50,427,355	4,377,588	54,804,943

See accompanying notes to the consolidated financial statements.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Consolidated 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	₩	7,195,890	1,788,152
Adjustments for:			
Depreciation		3,135,345	3,156,181
Amortization		444,100	465,558
Finance income		(1,270,044)	(1,185,934)
Finance costs		1,257,112	1,390,983
Income tax expense		2,220,183	236,934
Impairment loss on property, plant and equipment		311,520	27,040
Gain on disposal of property, plant and equipment		(12,016)	(15,548)
Loss on disposal of property, plant and equipment		95,720	142,126
Impairment loss on goodwill and other intangible assets		224,328	197,776
Gain on disposal of investments			
in subsidiaries, associates and joint ventures		(85,981)	(88,836)
Loss on disposal of investments			
in subsidiaries, associates and joint ventures		12,882	14,632
Share of profit of equity-accounted investees		(649,569)	(133,297)
Impairment loss on assets held for sale		-	5,030
Gain on disposal of assets held for sale		(60,208)	-
Expenses related to post-employment benefit		243,567	248,324
Impairment loss on trade and other receivables		27,178	53,934
Loss on valuation of inventories		78,783	54,014
Increase to provisions		159,592	184,984
Others, net		(37,287)	(21,076)
		<u>6,095,205</u>	<u>4,732,825</u>
Changes in operating assets and liabilities	39	(7,070,574)	2,803,586
Interest received		279,554	368,539
Interest paid		(433,794)	(624,399)
Dividends received		782,053	267,923
Income taxes paid		(588,969)	(650,889)
Net cash provided by operating activities	₩	<u>6,259,365</u>	<u>8,685,737</u>

See accompanying notes to the consolidated financial statements.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Consolidated 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			
Acquisitions of short-term financial instruments	₩	(41,797,503)	(43,307,727)
Proceeds from disposal of short-term financial instruments		40,336,417	40,500,759
Increase in loans		(526,643)	(329,236)
Collection of loans		568,536	138,270
Acquisitions of securities		(300,807)	(338,063)
Proceeds from disposal of securities		273,935	448,125
Acquisitions of long-term financial instruments		(289,612)	-
Acquisitions of investment		(492,435)	(141,785)
in subsidiaries, associates and joint ventures			
Proceeds from disposal of			
investment in subsidiaries, associates and joint ventures		61,013	18,401
Acquisitions of investment property		(91,880)	(976)
Proceeds from disposal of investment property		3,809	250
Acquisitions of property, plant and equipment		(3,068,591)	(3,154,412)
Proceeds from disposal of property, plant and equipment		(11,117)	(42,530)
Acquisitions of intangible assets		(431,122)	(300,645)
Proceeds from disposal of intangible assets		9,485	79,011
Proceeds from disposal of assets held for sale		67,293	37,680
Collection of lease receivables		97,701	61,567
Payment for acquisition of business, net of cash acquired		5,472	-
Cash received from			
disposal of business, net of cash transferred		-	77,488
Others, net		2,542	(5,442)
Net cash used in investing activities		(5,583,507)	(6,259,265)
Cash flows from financing activities	39		
Proceeds from borrowings		4,358,955	4,410,387
Repayment of borrowings		(3,719,542)	(3,644,057)
Proceeds from (repayment of) short-term borrowings, net		(329,897)	35,525
Capital contribution from non-controlling interests		660,488	176,062
Payment of cash dividends		(1,310,920)	(659,145)
Acquisition of treasury shares		(116,771)	(883,219)
Payment of interest of hybrid bonds		(16,493)	(16,539)
Repayment of lease liabilities		(281,288)	(217,312)
Repayment of redeemable convertible preferred shares		-	(278,581)
Others, net		(13,198)	(13,989)
Net cash provided by financing activities		(768,666)	(1,090,868)
Effect of exchange rate fluctuation on cash held		112,950	(95,272)
Net increase in cash and cash equivalents		20,142	1,240,332
Cash and cash equivalents at beginning of the period	5,10	4,755,578	3,515,246
Cash and cash equivalents at end of the period	5,10 ₩	4,775,720	4,755,578

See accompanying notes to the consolidated financial statements.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements

As of December 31, 2021 and 2020

1. General Information

General information about POSCO HOLDINGS INC. (formerly, POSCO), its 39 domestic subsidiaries including POSCO ENGINEERING & CONSTRUCTION CO., LTD., 130 foreign subsidiaries including POSCO America Corporation (collectively "the Company") and its 131 associates and joint ventures are as follows:

(a) The controlling company

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

The shares of POSCO HOLDINGS INC. have been listed on the Korea Exchange since June 10, 1988. POSCO HOLDINGS INC. 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.

POSCO HOLDINGS INC. (formerly, POSCO) 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, POSCO HOLDINGS INC.'s 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
	<u>87,186,835</u>	<u>100.00</u>

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

As of December 31, 2021, the shares of POSCO HOLDINGS INC. are listed on the Korea Exchange, while its ADRs are listed on the New York Stock Exchange.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

(b) Consolidated subsidiaries

Details of consolidated subsidiaries as of December 31, 2021 and 2020 are as follows:

Principal operations		Ownership (%)						Region
		December 31, 2021			December 31, 2020			
		POSCO	Subsidiaries	Total	POSCO	Subsidiaries	Total	
[Domestic]								
POSCO ENGINEERING & CONSTRUCTION, CO., LTD.	Engineering and construction	52.80	-	52.80	52.80	-	52.80	Pohang
POSCO COATED & COLOR STEEL Co., Ltd.	Coated steel manufacturing	56.87	-	56.87	56.87	-	56.87	Pohang
POSCO ICT	Computer hardware and software distribution	65.38	-	65.38	65.38	-	65.38	Pohang
POSCO Research Institute	Economic research and consulting	100.00	-	100.00	100.00	-	100.00	Seoul
POSCO O&M Co., Ltd.	Business facility maintenance	47.17	52.83	100.00	47.17	52.83	100.00	Seoul
POSCO A&C	Architecture and consulting	45.66	54.34	100.00	45.66	54.34	100.00	Seoul
POSCO Venture Capital Co., Ltd.	Investment in venture companies	95.00	-	95.00	95.00	-	95.00	Pohang
eNroB Corporation	Electronic commerce	7.50	59.94	67.44	7.50	59.94	67.44	Seoul
POSCO CHEMICAL CO., LTD.	Refractories manufacturing and sales	59.72	-	59.72	61.26	-	61.26	Pohang
POSCO-Terminal Co., Ltd.	Transporting and warehousing	100.00	-	100.00	51.00	-	51.00	Gwangyang
POSCO M-TECH	Packing materials manufacturing and sales	48.85	-	48.85	48.85	-	48.85	Pohang
POSCO ENERGY CO., LTD.	Generation of electricity	100.00	-	100.00	100.00	-	100.00	Seoul
PNR	Steel by product manufacturing and sales	70.00	-	70.00	70.00	-	70.00	Pohang
Future Creation Fund Postech								
Early Stage account	Investment in venture companies	-	40.00	40.00	-	40.00	40.00	Seoul
POSCO WOMAN'S FUND	Investment in venture companies	-	40.00	40.00	-	40.00	40.00	Seoul
SPH Co, LTD.	House manufacturing and management	-	100.00	100.00	-	100.00	100.00	Incheon
POSCO Group University	Education service and real estate business	100.00	-	100.00	100.00	-	100.00	Incheon
Growth Ladder POSCO K-Growth Global Fund	Investment in venture companies	-	50.00	50.00	-	50.00	50.00	Pohang
2015 POSCO New technology II Fund	Investment in venture companies	-	25.00	25.00	-	25.00	25.00	Pohang
POSCO Research & Technology	Intellectual Property Services and consulting	100.00	-	100.00	100.00	-	100.00	Seoul
TANCHEON E&E	Refuse derived fuel and power generation	-	100.00	100.00	-	100.00	100.00	Seoul
POSCO Humans	Construction	75.49	24.51	100.00	75.49	24.51	100.00	Pohang
Mapo Hibroad Parking Co., Ltd.	Construction	-	71.00	71.00	-	71.00	71.00	Seoul
Busan E&E Co., Ltd.	Refuse derived fuel and power generation	70.00	-	70.00	70.00	-	70.00	Busan
POSCO INTERNATIONAL Corporation	Trading, energy & resource development and others	62.91	0.03	62.94	62.91	0.03	62.94	Incheon
Pohang Scrap Recycling Distribution Center Co., Ltd.	Steel processing and sales	-	51.00	51.00	-	51.00	51.00	Pohang
Songdo Development PMC (Project Management Company) LLC.	Housing business agency	-	100.00	100.00	-	100.00	100.00	Incheon
Korea Fuel Cell	Fuel cell	-	100.00	100.00	-	100.00	100.00	Pohang
POSCO GEM fund no1	Investment in venture companies	98.81	1.19	100.00	98.81	1.19	100.00	Pohang
POSCO MOBILITY SOLUTION (formerly, POSCO SPS CORPORATION)	STC, TMC, Plate manufacturing and sales	-	100.00	100.00	-	100.00	100.00	Cheonan
P&O Chemical Co., Ltd.	Chemical production	-	51.00	51.00	-	51.00	51.00	Gwangyang
Posco New Growth	Investment in venture companies	99.66	0.34	100.00	88.89	11.11	100.00	Seoul
IMP Fund I	Investment in venture companies	98.04	-	98.04	98.04	-	98.04	Pohang
POSCO Lithium Solution Co., Ltd.	Lithium manufacturing and sales	100.00	-	100.00	-	-	-	Gwangyang
POSCO-HY Clean Metal Co., Ltd.	Non-ferrous metal smelting	65.00	-	65.00	-	-	-	Gwangyang
Consus PI private Real Estate Fund	REITs	-	66.67	66.67	-	-	-	-
New Energy Hub	Electricity and gas supply	87.44	12.56	100.00	-	-	-	Gwangyang
Posco Busan Newdeal Fund	Investment in venture companies	-	32.00	32.00	-	-	-	Pohang
Shinhan Green Energy Co., LTD	Electricity production	-	54.53	54.53	-	-	-	Shinahn
Suncheon Eco Trans Co. Ltd	Train manufacturing and management	-	-	-	100.00	-	100.00	Suncheon
Principal operations		Ownership (%)						Region
		POSCO	Subsidiaries	Total	POSCO	Subsidiaries	Total	
[Foreign]								
POSCO America Corporation	Research&Consulting	99.45	0.55	100.00	99.45	0.55	100.00	USA
POSCO AUSTRALIA PTY LTD	Raw material sales & mine development	100.00	-	100.00	100.00	-	100.00	Australia
POSCO Canada Ltd.	Coal sales	100.00	-	100.00	100.00	-	100.00	Canada
POSCAN ELKVIEW COAL LTD.	Coal sales	-	100.00	100.00	-	100.00	100.00	Canada
POSCO Asia Co., Ltd.	Finance	100.00	-	100.00	100.00	-	100.00	China
POSCO-CTPC Co., Ltd.	Steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	China
POSCO E&C Vietnam Co., Ltd.	Steel structure manufacturing and sales	-	100.00	100.00	-	100.00	100.00	Vietnam
POSCO (Zhangjiagang) Stainless Steel Co.,Ltd.	Stainless steel manufacturing and sales	58.60	23.88	82.48	58.60	23.88	82.48	China
POSCO (Thailand) Company Limited	Steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	Thailand
POSCO-MKPC SDN BHD	Steel manufacturing and sales	70.00	-	70.00	70.00	-	70.00	Malaysia
Qingdao Pohang Stainless Steel Co., Ltd.	Stainless steel manufacturing and sales	70.00	30.00	100.00	70.00	30.00	100.00	China
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	Steel manufacturing and sales	90.00	10.00	100.00	90.00	10.00	100.00	China
POSCO-China Qingdao Processing Center Co.Ltd.	Steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	China
POS-ORE PTY LTD	Iron ore development and sales	-	100.00	100.00	-	100.00	100.00	Australia
POSCO-China Holding Corp.	Holding company	100.00	-	100.00	100.00	-	100.00	China
POSCO JAPAN Co., Ltd.	Steel trading	100.00	-	100.00	100.00	-	100.00	Japan
POS-CD PTY LTD	Coal sales	-	100.00	100.00	-	100.00	100.00	Australia
POS-GC PTY LTD	Coal sales	-	100.00	100.00	-	100.00	100.00	Australia
POSCO-India Private Limited	Steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	India
POSCO-India Pune Processing Center. Pvt. Ltd.	Steel manufacturing and sales	65.00	-	65.00	65.00	-	65.00	India
POSCO Japan PC CO.,LTD	Steel manufacturing and sales	-	86.12	86.12	-	86.12	86.12	Japan
POSCO-CFPC Co., Ltd.	Steel manufacturing and sales	39.60	60.40	100.00	39.60	60.40	100.00	China
POSCO E&C CHINA Co., Ltd.	Civil engineering and construction	-	100.00	100.00	-	100.00	100.00	China
POSCO MPPC S.A. de C.V.	Steel manufacturing and sales	21.02	75.29	96.31	21.02	75.29	96.31	Mexico
Zhangjiagang Pohang Port Co., Ltd.	Loading and unloading service	-	100.00	100.00	-	100.00	100.00	China

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

[Foreign]	Principal operations	Ownership (%)						Region
		December 31, 2021			December 31, 2020			
		POSCO	Subsidiaries	Total	POSCO	Subsidiaries	Total	
POSCO-VIETNAM Co., Ltd.	Steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	Vietnam
POSCO MEXICO S.A. DE C.V.	Automotive steel sheet manufacturing and sales	83.28	14.88	98.16	83.28	14.88	98.16	Mexico
POSCO-Poland Wroclaw Processing Center Sp. z o. o.	Steel manufacturing and sales	60.00	-	60.00	60.00	-	60.00	Poland
POS-NP PTY LTD	Coal sales	-	100.00	100.00	-	100.00	100.00	Australia
DAEWOO INTERNATIONAL SHANGHAI WAIGAOQIAO CO., LTD	Intermediary trade & bonded warehouse operation	-	100.00	100.00	-	100.00	100.00	China
PT. Bio Inti Agrindo	Forest resources development	-	85.00	85.00	-	85.00	85.00	Indonesia
POSCO ENGINEERING AND CONSTRUCTION AUSTRALIA (POSCO E&C AUSTRALIA) PTY LTD	Construction and engineering service	-	100.00	100.00	-	100.00	100.00	Australia
POSCO-TISCO (ULILIN) PROCESSING CENTER Co., Ltd.	Steel manufacturing and sales	50.00	10.00	60.00	50.00	10.00	60.00	China
POSCO Thainox Public Company Limited	STS cold-rolled steel manufacturing and sales	74.56	-	74.56	74.56	-	74.56	Thailand
Hunchun Posco Hyundai International Logistics Co.,LTD	Logistics	-	81.55	81.55	-	80.00	80.00	China
POSCO INTERNATIONAL VIETNAM CO., LTD	Trading business	-	100.00	100.00	-	100.00	100.00	Vietnam
POSCO(Chongqing) Automotive Processing Center Co., Ltd.	Steel manufacturing and sales	90.00	10.00	100.00	90.00	10.00	100.00	China
POSCO-POSCO-CORE TECHNOLOGY SUZHOU POSCO-CORE TECHNOLOGY CO., LTD.	Component manufacturing and sales	33.91	66.09	100.00	84.85	15.15	100.00	China
PT Krakatau Posco Chemical Calcination (formerly, PT.Krakatau Posco Chemtech Calcination)	Quicklime manufacturing and sales	-	80.00	80.00	-	80.00	80.00	Indonesia
POSCO AFRICA (PROPRIETARY) LIMITED	Mine development	100.00	-	100.00	100.00	-	100.00	South Africa
POSCO ICT BRASIL	IT service and engineering	-	100.00	100.00	-	100.00	100.00	Brazil
POSCO Center Beijing	Real estate development, rental and management	-	100.00	100.00	-	100.00	100.00	China
POSCO-Malaysia SDN. BHD. PT KRAKATAU BLUE WATER	Steel manufacturing and sales Wastewater trearment facilities operation and maintenance	81.79	13.63	95.42	81.79	13.63	95.42	Malaysia
POSCO INTERNATIONAL MYANMAR CO.,LTD.	Trading business	-	67.00	67.00	-	67.00	67.00	Indonesia
POSCO-Italy Processing Center	Stainless steel sheet manufacturing and sales	88.89	11.11	100.00	88.89	11.11	100.00	Italy
Myanmar POSCO C&C Company,Limited.	Steel manufacturing and sales	-	70.00	70.00	-	70.00	70.00	Myanmar
POSCO ICT VIETNAM	IT service and electric control engineering	-	100.00	100.00	-	100.00	100.00	Vietnam
POSCO INTERNATIONAL GLOBAL DEVELOPMENT PTE.LTD. (formerly, Daewoo Global Development. Pte., Ltd)	Real estate development	-	75.00	75.00	-	75.00	75.00	Singapore
Myanmar POSCO Engineering & Construction Company, Limited.	Construction and engineering service	-	100.00	100.00	-	100.00	100.00	Myanmar
POS-Minerals Corporation	Mine development management and sales	-	100.00	100.00	-	100.00	100.00	USA
POSCO(Wuhu) Automotive Processing Center Co., Ltd.	Steel manufacturing and sales	68.57	31.43	100.00	68.57	31.43	100.00	China
POSCO Engineering and Construction India Private Limited	Civil engineering and construction	-	100.00	100.00	-	100.00	100.00	India
POSCO COATED STEEL (THAILAND) CO., LTD.	Vehicle steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	Thailand
POSCO INTERNATIONAL AMARA Co., Ltd.	Real estate development	-	85.00	85.00	-	85.00	85.00	Myanmar
POSMATE-CHINA CO., LTD	Business facility maintenance	-	100.00	100.00	-	100.00	100.00	China
POSCO-Mexico Villagran Wire-rod Processing Center	Steel manufacturing and sales	56.75	10.00	66.75	56.75	10.00	66.75	Mexico
POSCO ChengDu Processing Center	Steel manufacturing and sales	33.00	10.00	43.00	33.00	10.00	43.00	China
POSCO(Suzhou) Steel Processing Center CO., LTD.	Steel manufacturing and sales	30.00	70.00	100.00	30.00	70.00	100.00	China
POSCO E&C SMART S DE RL DE CV	Civil engineering and construction	-	100.00	100.00	-	100.00	100.00	Mexico
POSCO Philippine Manila Processing Center, Inc.	Steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	Philippines
POSCO E&C HOLDINGS CO.,Ltd.	Holding company	-	100.00	100.00	-	100.00	100.00	Thailand
POSCO INTERNATIONAL POWER (PNG)LAIE LTD.	Electricity production	-	100.00	100.00	-	100.00	100.00	Papua New Guinea
PT.Krakatau Posco Social Enterprise	Social enterprise	-	100.00	100.00	-	100.00	100.00	Indonesia
Ventanas Philippines Construction Inc	Construction	-	100.00	100.00	-	100.00	100.00	Philippines
SANPU TRADING Co., Ltd.	Raw material trading	-	70.04	70.04	-	70.04	70.04	China
Zhangjiagang BLZ Pohang International Trading	Steel Intermediate trade	-	100.00	100.00	-	100.00	100.00	China
POSCO RIU Limited Liability Company	Trade and business development	100.00	-	100.00	100.00	-	100.00	Russia
GOLDEN LACE POSCO INTERNATIONAL CO., LTD.	Rice processing	-	60.00	60.00	-	60.00	60.00	Myanmar
POSCO ICT-China CO.,LTD	IT service and DVR business	-	100.00	100.00	-	100.00	100.00	China
Pos-Sea Pte Ltd	Steel Intermediate trade	-	100.00	100.00	-	100.00	100.00	Singapore
POSCO Europe Steel Distribution Center	Logistics & Steel sales	50.00	20.00	70.00	50.00	20.00	70.00	Slovenia
POSCO ENGINEERING (THAILAND) CO., LTD.	Construction and engineering service	-	100.00	100.00	-	100.00	100.00	Thailand
POSCO VST CO., LTD.	Stainless steel sheet manufacturing and sales	95.65	-	95.65	95.65	-	95.65	Vietnam
POSCO INTERNATIONAL UKRAINE, LLC.	Grain sales	-	100.00	100.00	-	100.00	100.00	Ukraine
Zhangjiagang Pohang Refractories Co., Ltd.	Refractory materials sales & furnace maintenance	-	51.00	51.00	-	51.00	51.00	China
POSCO Maharashtra Steel Private Limited	Steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	India
POSCO INDIA PROCESSING CENTER PRIVATE LIMITED	Steel manufacturing and sales	93.34	1.98	95.32	93.34	1.98	95.32	India
POSCO TNPQ Otomotiv Celik San. Ve Tic. A.S	Steel manufacturing and sales	100.00	-	100.00	100.00	-	100.00	Turkey
POSCO Vietnam Processing Center. Co.,Ltd	Steel manufacturing and sales	94.05	5.95	100.00	83.54	5.29	88.83	Vietnam
POSCO(Liaoning) Automotive Processing Center Co., Ltd.	Steel manufacturing and sales	90.00	10.00	100.00	90.00	10.00	100.00	China
POSCO-Indonesia Jakarta Processing Center PT.MRI	Steel manufacturing and sales	70.51	21.69	92.20	70.51	21.69	92.20	Indonesia
POSCO TMC INDIA PRIVATE LIMITED	Mine development	65.00	-	65.00	65.00	-	65.00	Indonesia
POSCO AMERICA ALABAMA PROCESSING CENTER CO., LTD.	Steel manufacturing and sales	-	100.00	100.00	-	100.00	100.00	India
POSCO(Yantai) Automotive Processing Center Co., Ltd.	Steel manufacturing and sales	-	97.80	97.80	-	97.80	97.80	USA
POSCO India Steel Distribution Center Private Ltd.	Steel manufacturing and sales	90.00	10.00	100.00	90.00	10.00	100.00	China
POSCO YAMATO VINA STEEL JOINT STOCK COMPANY (formerly, POSCO SS VINA JOINT STOCK COMPANY)	Steel logistics	-	100.00	100.00	-	100.00	100.00	India
PT.POSCO ICT INDONESIA	Steel manufacturing and sales	51.00	-	51.00	51.00	-	51.00	Vietnam
POSCO NCR Coal Ltd.	IT service and electric control engineering	-	66.99	66.99	-	66.99	66.99	Indonesia
POSCO WA PTY LTD	Coal sales	-	100.00	100.00	-	100.00	100.00	Canada
POSCO AUSTRIA GP PTY LIMITED	Iron ore sales & mine development	100.00	-	100.00	100.00	-	100.00	Australia
	Resource development	-	100.00	100.00	-	100.00	100.00	Australia

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

Principal operations	Ownership (%)						Region	
	December 31, 2021			December 31, 2020				
	POSCO	Subsidiaries	Total	POSCO	Subsidiaries	Total		
[Foreign]								
PT. KRAKATAU POSCO ENERGY	Electricity production construction and operation	-	90.00	90.00	-	90.00	90.00	Indonesia
POSCO INTERNATIONAL AMERICA CORP.	Trading business	-	100.00	100.00	-	100.00	100.00	USA
POSCO INTERNATIONAL Deutschland GMBH	Trading business	-	100.00	100.00	-	100.00	100.00	Germany
POSCO INTERNATIONAL JAPAN CORP.	Trading business	-	100.00	100.00	-	100.00	100.00	Japan
POSCO INTERNATIONAL SINGAPORE PTE. LTD.	Trading business	-	100.00	100.00	-	100.00	100.00	Singapore
POSCO INTERNATIONAL ITALIA S.R.L.	Trading business	-	100.00	100.00	-	100.00	100.00	Italy
POSCO INTERNATIONAL (CHINA) CO., LTD	Trading business	-	100.00	100.00	-	100.00	100.00	China
POSCO INTERNATIONAL TEXTILE LLC.	Textile manufacturing	-	100.00	100.00	-	100.00	100.00	Uzbekistan
POSCO INTERNATIONAL AUSTRALIA HOLDINGS PTY. LTD.	Resource development	-	100.00	100.00	-	100.00	100.00	Australia
POSCO MAURITIUS LIMITED	Coal development and sales	-	100.00	100.00	-	100.00	100.00	Mauritius
PT. KRAKATAU POSCO	Steel manufacturing and sales	70.00	-	70.00	70.00	-	70.00	Indonesia
POSCO INTERNATIONAL MEXICO, S.A de C.V..	Trading business	-	100.00	100.00	-	100.00	100.00	Mexico
POSCO INTERNATIONAL MALAYSIA SDN BHD	Trading business	-	100.00	100.00	-	100.00	100.00	Malaysia
PT.POSCO INDONESIA INTI	Consulting	100.00	-	100.00	100.00	-	100.00	Indonesia
POSCO INTERNATIONAL SHANGHAI CO., LTD.	Trading business	-	100.00	100.00	-	100.00	100.00	China
PGSF, L.P.	Investment in bio tech Industry	-	100.00	100.00	-	100.00	100.00	USA
POSCO INTERNATIONAL INDIA PVT. LTD	Trading business	-	100.00	100.00	-	100.00	100.00	India
POSCO(Dalian) IT Center Development Co., Ltd.	Real estate development and investment	-	100.00	100.00	-	100.00	100.00	China
PT. POSCO E&C INDONESIA	Civil engineering and construction	-	100.00	100.00	-	100.00	100.00	Indonesia
HUME COAL PTY LTD	Raw material manufacturing	-	100.00	100.00	-	100.00	100.00	Australia
Brazil Sao Paulo Steel Processing Center	Steel manufacturing and sales	-	76.00	76.00	-	76.00	76.00	Brazil
POSCO ENGINEERING & CONSTRUCTION DO BRAZIL LTDA.	Construction	-	100.00	100.00	-	100.00	100.00	Brazil
POSCO ASSAN TST STEEL INDUSTRY	Steel manufacturing and sales	60.00	10.00	70.00	60.00	10.00	70.00	Turkey
HONG KONG POSCO E&C (CHINA) INVESTMENT Co., Ltd.	Real estate development and investment	-	100.00	100.00	-	100.00	100.00	Hongkong
JB CLARK HILLS	Apartment construction	-	70.00	70.00	-	70.00	70.00	Philippines
POS-LT Pty Ltd	Lithium mining investment	-	100.00	100.00	-	100.00	100.00	Australia
ZHEJIANG POSCO-HUAYOU ESM CO., LTD	Anode material manufacturing	60.00	-	60.00	60.00	-	60.00	China
POSCO Argentina S.A.U.	Mineral exploration/manufacturing/sales	100.00	-	100.00	100.00	-	100.00	Argentina
GRAIN TERMINAL HOLDING PTE. LTD.	Trading business	-	75.00	75.00	-	75.00	75.00	Singapore
Mykolaiv Milling Works PJSC.	Grain trading	-	100.00	100.00	-	100.00	100.00	Ukraine
Yuzhnaya Stevedoring Company Limited LLC.	Cargo handling	-	100.00	100.00	-	100.00	100.00	Ukraine
Posco International (Thailand) Co., Ltd.	Trade	-	100.00	100.00	-	100.00	100.00	Thailand
PT POSCO INTERNATIONAL INDONESIA	Trade	-	100.00	100.00	-	100.00	100.00	Indonesia
PEC POWERCON SDN. BHD.	Construction and engineering service	-	100.00	100.00	-	100.00	100.00	Malaysia
POSCO CHEMICAL Free Zone Enterprise	Refractory Construction	-	100.00	100.00	-	100.00	100.00	Nigeria
Poland Legnica Sourcing Center Sp. z o.o	Non-ferrous metal Smetling	100.00	-	100.00	-	-	-	Poland
POSCO INTERNATIONAL E&P MALAYSIA SDN. BHD.	Extraction of Crude petroleum and Natural gas	-	100.00	100.00	-	-	-	Malaysia
AGPA PTE. LTD.	Holding company	-	100.00	100.00	-	-	-	Singapore
POSCO AMERICA COMERCIALIZADORA S DE RL DE CV	Workforce services	-	-	-	-	100.00	100.00	Mexico
POSCO(Guangdong) Automotive Steel Co., Ltd.	Vehicle steel manufacturing and sales	-	-	-	83.64	10.00	93.64	China
POSCO E&C Mongolia	Construction and engineering service	-	-	-	-	100.00	100.00	Mongolia
POSCO INTERNATIONAL POWER (PNGPOM) LTD.	Electricity production	-	-	-	-	100.00	100.00	Papua New Guinea
DAESAN (CAMBODIA) Co., Ltd	Real estate development and investment	-	-	-	-	100.00	100.00	Cambodia

The controlling company's interests in the subsidiaries increased by ₩83,547 million (POSCO CHEMICAL CO., LTD and others) and decreased ₩27,716 million (POSCO Thainox Public Company Limited and others) in 2021 and 2020, respectively, as a result of changes in the Company's ownership investment in subsidiaries that did not result in a loss of control.

POSCO received dividends of ₩133,125 million and ₩93,674 million from its subsidiaries in aggregate in 2021 and 2020, respectively.

As of December 31, 2021, there are no restrictions on the ability of subsidiaries to transfer funds to the controlling company, such as in the form of cash dividends, repayment of loans or payment of advances.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(c) Summarized financial information of principal subsidiaries as of and for the years ended December 31, 2021 and 2020 are as follows:

1) December 31, 2021

(in millions of Won)

Company	Assets	Liabilities	Equity	Sales	Net income (loss)
[Domestic]					
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	6,634,620	3,521,099	3,113,521	7,018,744	249,472
POSCO COATED & COLOR STEEL Co., Ltd.	566,959	251,038	315,921	1,328,999	95,790
POSCO ICT	628,144	274,578	353,566	839,245	(15,534)
POSCO A&C	86,952	55,099	31,853	179,006	2,423
eNtoB Corporation	149,177	94,500	54,677	862,069	7,465
POSCO CHEMICAL CO., LTD.	3,761,333	1,430,012	2,331,321	1,939,524	119,124
POSCO M-TECH	156,334	51,769	104,565	323,878	13,064
POSCO ENERGY CO., LTD.	3,934,447	2,475,850	1,458,597	1,895,577	172,496
POSCO INTERNATIONAL Corporation	9,144,515	6,001,763	3,142,752	30,527,683	201,231
POSCO MOBILITY SOLUTION (formerly, POSCO SPS CORPORATION)	845,109	249,843	595,266	1,179,596	31,838
[Foreign]					
POSCO America Corporation	107,281	6,970	100,311	18,421	9,813
POSCO AUSTRALIA PTY LTD(*1)	860,920	97,200	763,720	140,423	35,287
POSCO Asia Co., Ltd.	1,144,213	922,686	221,527	124,569	3,898
POSCO-CTPC Co., Ltd.	142,857	88,068	54,789	272,549	1,836
POSCO (Zhangjiagang) Stainless Steel Co.,Ltd.	1,145,166	406,252	738,914	3,747,283	124,368
POSCO(Thailand) Company Limited	186,378	89,264	97,114	487,608	17,202
Qingdao Pohang Stainless Steel Co., Ltd.	189,037	53,859	135,178	418,547	12,427
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	458,874	287,330	171,544	841,973	8,509
POSCO-China Holding Corp.	783,937	246,649	537,288	50,833	(468)
POSCO JAPAN Co., Ltd.	779,133	592,434	186,699	1,630,156	14,596
POSCO-India Pune Processing Center. Pvt. Ltd.	174,293	134,868	39,425	403,041	11,077
POSCO Japan PC CO.,LTD	371,800	299,430	72,370	553,263	10,701
POSCO-CFPC Co., Ltd.	366,616	300,028	66,588	1,105,299	6,765
POSCO MPPC S.A. de C.V.	421,707	332,152	89,555	596,680	6,296
POSCO-VIETNAM Co., Ltd.	435,512	384,377	51,135	1,198,970	42,190
POSCO MEXICO S.A. DE C.V.	668,843	445,641	223,202	630,312	3,405
POSCO Thainox Public Company Limited	490,646	142,881	347,765	715,151	31,584
POSCO Center Beijing	461,076	288,032	173,044	39,401	12,464
POSCO COATED STEEL (THAILAND) CO., LTD.	351,464	268,985	82,479	413,326	3,644
POSCO INTERNATIONAL AMARA Co., Ltd.	298,524	353,658	(55,134)	27,408	(26,954)
POSCO VST CO., LTD.	327,059	258,702	68,357	640,725	27,909
POSCO Maharashtra Steel Private Limited	1,486,478	962,899	523,579	1,679,472	149,007
POSCO INDIA PROCESSING CENTER PRIVATE LIMITED	286,619	218,463	68,156	674,205	20,581
POSCO Vietnam Processing Center. Co.,Ltd	282,202	201,443	80,759	609,033	23,557
POSCO(Liaoning) Automotive Processing Center Co., Ltd.	112,969	66,962	46,007	267,115	3,125
POSCO YAMATO VINA STEEL JOINT STOCK COMPANY	524,012	249,863	274,149	473,386	37,741
PT. KRAKATAU POSCO ENERGY	264,092	108,594	155,498	32,428	16,207
POSCO INTERNATIONAL AMERICA CORP.	597,758	509,778	87,980	2,304,487	10,531
POSCO INTERNATIONAL Deutschland GMBH	381,367	374,284	7,083	645,792	2,952
POSCO INTERNATIONAL JAPAN CORP.	228,615	218,718	9,897	892,322	5,821
POSCO INTERNATIONAL SINGAPORE PTE. LTD.	416,495	407,243	9,252	4,285,372	3,094
POSCO INTERNATIONAL ITALIA S.R.L.	247,485	236,625	10,860	678,388	1,494
POSCO INTERNATIONAL (CHINA) CO., LTD	63,411	38,682	24,729	352,561	6,703
PT. KRAKATAU POSCO	3,158,351	2,933,782	224,569	2,694,601	476,391
POSCO INTERNATIONAL MALAYSIA SDN BHD	24,215	21,479	2,736	346,271	81
POSCO INTERNATIONAL INDIA PVT. LTD	13,263	19,775	(6,512)	29,093	(7,671)

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

(in millions of Won)

Company	Assets	Liabilities	Equity	Sales	Net income (loss)
[Foreign]					
POSCO ASSAN TST STEEL INDUSTRY	602,089	567,616	34,473	707,384	93,802
POSCO AMERICA ALABAMA PROCESSING CENTER CO., LTD.	145,715	125,091	20,624	229,046	(766)
POSCO Argentina S.A.U.	376,010	2,079	373,931	109	(9,252)
POSCO-MKPC SDN BHD	149,755	95,831	53,924	165,893	8,798
POSCO INTERNATIONAL VIETNAM CO.,LTD.	32,462	25,938	6,524	509,873	3,316
POSCO INTERNATIONAL SHANGHAI CO.,LTD.	59,700	49,128	10,572	152,676	1,811

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

2) December 31, 2020

(in millions of Won)

Company	Assets	Liabilities	Equity	Sales	Net income (loss)
[Domestic]					
POSCO ENGINEERING & CONSTRUCTION., CO., LTD.	6,153,939	3,272,409	2,881,530	7,268,310	242,298
POSCO COATED & COLOR STEEL Co., Ltd.	463,458	238,481	224,977	870,212	4,503
POSCO ICT	673,669	304,016	369,653	942,950	13,289
POSCO A&C	87,422	56,353	31,069	153,605	4,816
eNtoB Corporation	111,897	64,745	47,152	606,432	1,246
POSCO CHEMICAL CO., LTD.	1,992,168	1,032,785	959,383	1,524,146	54,225
POSCO M-TECH	130,303	33,903	96,400	255,400	9,410
POSCO ENERGY CO., LTD.	3,815,748	2,522,350	1,293,398	1,446,576	128,986
POSCO INTERNATIONAL	7,205,951	4,184,237	3,021,714	19,224,845	203,975
POSCO MOBILITY SOLUTION (formerly, POSCO SPS CORPORATION)	680,006	118,357	561,649	673,694	8,389

(in millions of Won)

Company	Assets	Liabilities	Equity	Sales	Net income (loss)
[Foreign]					
POSCO America Corporation	117,803	35,091	82,712	380,400	3,759
POSCO AUSTRALIA PTY LTD(*1)	611,146	27,217	583,929	94,357	25,769
POSCO Asia Co., Ltd.	2,005,836	1,806,421	199,415	3,397,863	(2,528)
POSCO-CTPC Co., Ltd.	96,217	48,052	48,165	233,512	3,998
POSCO (Zhangjiagang) Stainless Steel Co.,Ltd. (formerly, Zhangjiagang Pohang Stainless Steel Co., LTD)	974,572	429,295	545,277	3,033,552	11,226
POSCO(Thailand) Company Limited	148,558	66,585	81,973	304,381	1,520
Qingdao Pohang Stainless Steel Co., Ltd.	159,973	50,499	109,474	339,284	2,170
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	343,038	197,279	145,759	786,412	5,621
POSCO-China Holding Corp.	756,300	272,061	484,239	275,069	(28,936)
POSCO JAPAN Co., Ltd.	560,796	385,749	175,047	1,320,360	8,945
POSCO-India Pune Processing Center. Pvt. Ltd.	112,679	86,539	26,140	267,423	2,608
POSCO Japan PC CO.,LTD	290,835	227,603	63,232	460,653	2,185
POSCO-CFPC Co., Ltd.	230,643	177,323	53,320	970,333	2,365
POSCO MPPC S.A. de C.V.	344,621	268,419	76,202	503,688	(331)
POSCO-VIETNAM Co., Ltd.	332,237	325,429	6,808	631,348	3,102
POSCO MEXICO S.A. DE C.V.	591,513	389,906	201,607	383,933	(11,292)
POSCO Thainox Public Company Limited	394,696	71,935	322,761	516,368	(1,049)
POSCO Center Beijing	414,377	270,997	143,380	36,974	2,962
POSCO COATED STEEL (THAILAND) CO., LTD.	349,932	269,367	80,565	284,450	(5,440)
POSCO INTERNATIONAL AMARA Co., Ltd.	297,229	322,196	(24,967)	25,851	(19,531)
POSCO VST CO., LTD.	248,677	212,482	36,195	472,181	(150)
POSCO Maharashtra Steel Private Limited	1,068,777	723,441	345,336	874,914	(25,464)
POSCO INDIA PROCESSING CENTER PRIVATE LIMITED(formerly, POSCO INDIA HOLDINGS PRIVATE LIMITED)	205,357	161,540	43,817	463,550	(369)
POSCO VIETNAM HOLDINGS CO., LTD	168,543	112,326	56,217	497,626	4,442

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

(in millions of Won)

Company	Assets	Liabilities	Equity	Sales	Net income (loss)
[Foreign]					
POSCO(Liaoning) Automotive Processing Center Co., Ltd.	97,827	59,437	38,390	232,309	1,508
POSCO YAMATO VINA STEEL JOINT STOCK COMPANY (formerly, POSCO SS VINA JOINT STOCK COMPANY)	395,583	179,871	215,712	323,801	(17,515)
PT. KRAKATAU POSCO ENERGY	262,752	113,696	149,056	35,400	14,294
POSCO INTERNATIONAL AMERICA CORP.	312,286	241,556	70,730	1,224,752	5,592
POSCO INTERNATIONAL Deutschland GMBH	203,112	199,086	4,026	466,391	(6,994)
POSCO INTERNATIONAL JAPAN CORP.	158,083	153,844	4,239	663,297	(109)
POSCO INTERNATIONAL SINGAPORE PTE. LTD.	379,777	374,228	5,549	2,886,275	1,516
POSCO INTERNATIONAL ITALIA S.R.L.	131,484	122,135	9,349	515,133	(358)
POSCO INTERNATIONAL (CHINA) CO., LTD	47,311	31,453	15,858	218,521	38
PT. KRAKATAU POSCO	2,709,506	2,958,075	(248,569)	1,690,249	(204,617)
POSCO DAEWOO MALAYSIA SDN. BHD.	58,015	55,497	2,518	246,135	(577)
POSCO INTERNATIONAL INDIA PVT. LTD	21,866	20,575	1,291	212,579	(3,436)
POSCO ASSAN TST STEEL INDUSTRY	512,360	573,495	(61,135)	475,749	124
POSCO AMERICA ALABAMA PROCESSING CENTER CO., LTD.	117,291	97,635	19,656	179,081	(5,975)
POSCO Argentina S.A.U.	351,318	2,607	348,711	76	(5,832)
POSCO-MKPC SDN BHD	101,862	58,909	42,953	165,752	1,781
POSCO INTERNATIONAL VIETNAM CO.,LTD.	26,248	23,480	2,768	221,603	118
POSCO INTERNATIONAL SHANGHAI CO.,LTD.	38,850	31,078	7,772	181,736	(1,046)

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

(d) Details of non-controlling interests by entity as of and for the years ended December 31, 2021 and 2020 are as follows:

1) December 31, 2021

(in millions of Won)

	POSCO INTERNATIONAL Corporation	PT. KRAKATAU POSCO	POSCO CHEMICAL CO., LTD	POSCO ENGINEERING & CONSTRUCTION CO., LTD.	POSCO ICT	Others	Total
Current assets	5,952,771	968,129	2,071,307	4,423,461	423,422	9,496,214	23,335,304
Non-current assets	3,322,590	2,388,139	1,708,558	1,900,316	185,508	4,772,409	14,277,520
Current liabilities	(4,537,785)	(1,155,003)	(604,333)	(2,913,223)	(263,794)	(7,918,852)	(17,392,990)
Non-current liabilities	(1,666,455)	(1,778,668)	(835,222)	(576,143)	(10,051)	(1,706,779)	(6,573,318)
Equity	3,071,121	422,597	2,340,310	2,834,411	335,085	4,642,992	13,646,516
Non-controlling interests	1,138,360	126,779	942,660	1,337,867	116,000	1,542,960	5,204,626
Sales	30,545,740	2,694,601	1,939,524	7,017,077	832,127	28,538,963	71,568,032
Profit (loss) for the period	223,845	500,801	128,960	286,729	(18,802)	690,197	1,811,730
Profit (loss) attributable to non-controlling interests	82,972	150,240	51,944	135,339	(6,509)	189,590	603,576
Cash flows from operating activities	(235,359)	151,393	36,745	113,021	(18,494)	130,828	178,134
Cash flows from investing activities	(91,619)	(4,022)	(639,965)	(243,463)	(17,309)	(86,585)	(1,082,963)
Cash flows from financing activities (before dividends to non-controlling interest)	279,529	(81,187)	595,521	36,359	(226)	9,604	839,600
Dividends to non-controlling interest	(32,004)	-	(7,370)	(9,867)	(2,628)	(7,671)	(59,540)
Effect of exchange rate fluctuation on cash held	1,937	3,916	6	3,048	3	6,216	15,126
Net increase (decrease) in cash and cash equivalents	(77,516)	70,100	(15,063)	(100,902)	(38,654)	52,392	(109,643)

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

2) December 31, 2020

(in millions of Won)

	POSCO INTERNATIONAL Corporation	PT. KRAKATAU POSCO	POSCO CHEMICAL CO., LTD.	POSCO ENGINEERING & CONSTRUCTION CO., LTD.	POSCO ICT	Others	Total
Current assets	3,992,996	503,633	774,817	4,040,470	465,158	7,207,141	16,984,215
Non-current assets	3,410,528	2,366,359	1,229,349	1,800,539	187,415	4,789,484	13,783,674
Current liabilities	(2,649,187)	(1,722,805)	(203,443)	(2,577,173)	(278,335)	(6,354,111)	(13,785,054)
Non-current liabilities	(1,816,160)	(1,235,948)	(833,857)	(667,395)	(24,132)	(1,727,139)	(6,304,631)
Equity	2,938,177	(88,761)	966,866	2,596,441	350,106	3,915,375	10,678,204
Non-controlling interests	1,089,082	(26,628)	374,582	1,225,543	121,200	1,330,280	4,114,059
Sales	19,230,652	1,691,310	1,524,146	7,269,843	935,958	21,059,978	51,711,887
Profit (loss) for the period	173,155	(179,403)	29,720	354,799	8,961	(44,660)	342,572
Profit (loss) attributable							
to non-controlling interests	64,183	(53,821)	11,514	167,468	3,102	(19,899)	172,547
Cash flows from operating activities	324,822	62,276	11,021	451,803	21,403	123,108	994,433
Cash flows from investing activities	(38,535)	212	(162,861)	(398,937)	(4,841)	(93,565)	(698,527)
Cash flows from financing activities							
(before dividends to non-controlling interest)	(99,765)	(45,207)	122,736	9,475	(302)	(192,311)	(205,374)
Dividends to non-controlling interest	(32,004)	-	(9,451)	(9,867)	(2,628)	(6,102)	(60,052)
Effect of exchange rate fluctuation							
on cash held	(2,425)	(1,421)	(398)	(2,220)	(74)	702	(5,836)
Net increase (decrease)							
in cash and cash equivalents	152,093	15,860	(38,953)	50,254	13,558	(168,168)	24,644

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

(e) Details of associates and joint ventures

1) Associates

Details of associates as of December 31, 2021 and 2020 are as follows:

Investee	Category of business	Ownership (%)		Region
		2021	2020	
[Domestic]				
New Songdo International City Development, LLC	Real estate rental	29.90	29.90	Incheon
Gale International Korea, LLC	Real estate rental	29.90	29.90	Incheon
SNNC	Raw material manufacturing and sales	49.00	49.00	Gwangyang
KONES, Corp.	Technical service	26.72	26.72	Gyeongju
CHUNGJU ENTERPRISE CITY DEVELOPMENT Co.,Ltd	Real estate development	29.53	29.53	Chungju
DAEHO GLOBAL MANAGEMENT CO., LTD.	Investment advisory service	35.82	35.82	Pohang
Mokpo Deayang Industrial Corporation	Real estate development and rental	27.40	27.40	Mokpo
Gunggi Green Energy(*1)	Electricity generation	19.00	19.00	Hwaseong
Pohang Special Welding Co.,Ltd.	Welding material and tools manufacturing and sales	50.00	50.00	Pohang
KoFC POSCO HANWHA KB Shared Growth NO. 2. Private Equity Fund(*3)	Investment in new technologies	-	12.50	Seoul
EQP POSCO Global NO1 Natural Resources Private Equity Fund	Investment in new technologies	42.82	36.34	Seoul
KC Chemicals CORP.(*1)	Machinery manufacturing	19.00	19.00	Hwaseong
POSTECH Social Enterprise Fund(*1)	Investment in new technologies	9.17	9.17	Seoul
QSONE Co.,Ltd.	Real estate rental and facility management	50.00	50.00	Seoul
Chun-cheon Energy Co., Ltd	Electricity generation	49.10	49.10	Chuncheon
Keystone NO.1 Private Equity Fund(*3)	Private equity financial	-	52.58	Seoul
Noeul Green Energy(*1)	Electricity generation	10.00	10.00	Seoul
Posco-IDV Growth Ladder IP Fund(*1)	Investment in new technologies	17.86	17.86	Seoul
Daesung Steel(*1)	Steel sales	17.54	17.54	Busan
Pohang E&E Co., LTD	Investment in waste energy	30.00	30.00	Pohang
POSCO Energy Valley Fund	Investment in new technologies	20.00	20.00	Pohang
Hyundai Invest Guggenheim CLO				
Qualified Private Special Asset Trust No.2	Investment in new technologies	38.47	38.45	Seoul
Posco Agri-Food Export Fund	Investment in new technologies	30.00	30.00	Seoul
Posco Culture Contents Fund	Investment in new technologies	31.67	31.67	Seoul
PCC_Centroid 1st Fund(*3)	Investment in new technologies	-	24.10	Seoul
PCC Amberstone Private Equity Fund 1(*1)	Investment in new technologies	8.80	8.80	Seoul
UITrans LRT Co., Ltd.	Transporting	38.19	38.19	Seoul
POSCO Advanced Technical Staff Fund(*1)	Investment in new technologies	15.87	15.87	Seoul
POSCO 4th Industrial Revolution Fund	Investment in new technologies	20.00	20.00	Seoul
Pureun Tongyeong Enviro Co., Ltd.	Sewerage treatment	20.40	20.40	Tongyeong
Pure Gimpo Co., Ltd.	Construction	28.79	28.79	Gimpo
Posgreen Co., Ltd.(*1)	Lime and plaster manufacturing	19.00	19.00	Gwangyang
Clean Iksan Co., Ltd.	Construction	23.50	23.50	Iksan
Innovalley Co., Ltd.	Real estate development	28.77	28.77	Yongin
BLUE OCEAN Private Equity Fund	Private equity financial	27.52	27.52	Seoul
Western Inland highway CO.,LTD.	Construction	20.39	29.82	Incheon
Pocheon-Hwado Highway Corp.				
(Formerly, Metropolitan Outer Ring Expressway co., Ltd.)(*5)	Investment in Expressway	23.27	21.27	Incheon
INNOPOLIS Job Creation Fund II(*1)	Investment in new technologies	6.13	6.13	Seoul
Samcheok Blue Power Co.,Ltd.	Generation of electricity	34.00	34.00	Samcheok
INKOTECH, INC.(*1)	Electricity generation and sales	10.00	10.00	Seoul
PCC Social Enterprise Fund II (*1)	Investment in new technologies business	16.67	16.67	Seoul
PCC Amberstone Private Equity Fund II (*1)	Private equity trust	19.91	19.91	Seoul
NEXTRAIN Co.,Ltd(*4)	Service maintenance and management	-	21.26	Incheon
TK CHEMICAL CORPORATION(*4)	Chemical	-	5.01	Daegu
PCC-Conar No.1 Fund(*1)	Investment in new technologies business	14.68	13.64	Pohang
HYOCHUN Co., Ltd(*1)	Screen door operation and other	18.00	18.00	Seoul
RPSD Project Co., Ltd	Real estate development	29.00	29.00	Incheon
PCC EV Fund(*1)	Investment in new technologies business	18.18	18.18	Pohang
IBKC-PCC 1st Fund(*1)	Investment in new technologies business	18.18	18.18	Pohang
2019 PCC Materials and Parts Fund(*1)	Investment in new technologies business	8.70	8.70	Pohang
Shinahn wind Power generation(*4)	Electric, gas, steam	-	19.00	Suwon
2019 PCC New technology Fund(*3)	Investment in new technologies business	-	4.76	Pohang
PCC-Woori LP secondary Fund(*1)	Investment in new technologies business	18.85	18.85	Pohang
KPGE Inc.	Wholesales and retail, generator material, trade	25.00	25.00	Busan
CURO CO.,LTD.(*1)	Manufacturing, construction	0.54	0.54	Ulsan
The Blue Gimpo Co., Ltd.(*4)	Construction and engineering service	-	33.33	Incheon
Link City PFV Inc.	Contruction, housing construction and sales	44.00	44.00	Uijeongbu
BNH-POSCO Bio Healthcare Fund(*1)	Investment in new technologies business	18.14	18.14	Pohang
PCC-BM Project Fund(*1)	Investment in new technologies business	8.77	8.77	Pohang

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

Investee	Category of business	Ownership (%)		Region
		2021	2020	
[Domestic]				
Energy Innovation Fund I(*1)	Investment in new technologies business	10.11	10.11	Pohang
ConsusPSdevelopment Professional Private Real Estate Fund	Real estate development	50.00	50.00	Seoul
POSTECH Holdings 4th Fund	Private Investment Association	40.00	40.00	Pohang
SNU STH IP Fund	Private Investment Association	33.33	33.33	Seoul
PCC-BM Project Fund 2(*1)	Investment in new technologies business	13.70	13.70	Pohang
G&G Technology Innovation Fund No.1(*1)	Investment in new technologies business	13.97	13.97	Seongnam
NPX-PCC Edutech Fund(*1)	Investment in new technologies business	19.96	19.96	Pohang
C&-PCC I Fund(*1)	Investment in new technologies business	0.68	0.68	Pohang
2020 POSCO-MOORIM Bio New Technology Fund(*1)	Investment in new technologies business	5.00	5.00	Pohang
PCC-KAI Secondary I Fund(*1)	Investment in new technologies business	19.12	19.12	Seoul
Human Eco-Land Co., Ltd.(*2)	Sewage facilities management	27.95	-	Ansan
2021 PCC Bio New Technology Fund(*1,2)	Investment in new technologies	5.45	-	Pohang
Consus BG Private Real Estate Fund No.2(*2)	Real estate development	50.00	-	Seoul
Consus OS Private Real Estate Fund(*2)	Real estate development	50.00	-	Seoul
Consus NewDeal Infra Development Specialized Private Special Asset Investment Trust 1(*2)	Investment Association	40.00	-	Seoul
Hybrid ESG Secondary Fund No.1(*1,2)	Investment Association	18.27	-	Pohang
Investee	Category of business	Ownership (%)		Region
		2021	2020	
[Foreign]				
VSC POSCO Steel Corporation	Steel processing and sales	50.00	50.00	Vietnam
POSCHROME (PROPRIETARY) LIMITED	Raw material manufacturing and sales	50.00	50.00	South Africa
CAML RESOURCES PTY LTD	Raw material manufacturing and sales	33.34	33.34	Australia
Nickel Mining Company SAS	Raw material manufacturing and sales	49.00	49.00	New Caledonia
PT. Wampu Electric Power	Construction and civil engineering	20.00	20.00	Indonesia
POSK(Pinghu) Steel Processing Center Co., Ltd.	Steel processing and sales	20.00	20.00	China
PT.INDONESIA POS-CHEMTECH CHOSUN Ref	Refractory manufacturing and sales	30.19	30.19	Indonesia
NS-Thainox Auto Co., Ltd.	Steel manufacturing and sales	49.00	49.00	Thailand
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	Tinplate manufacturing and sales	34.00	34.00	China
PT. Tanggamus Electric Power(*1)	Construction and civil engineering	17.50	17.50	Indonesia
LLP POSUK Titanium	Titanium manufacturing and sales	35.30	35.30	Kazakhstan
LI3 ENERGY INC(*4)	Resource development	-	26.06	Peru
IMFA ALLOYS FINLEASE LTD	Raw material manufacturing and sales	24.00	24.00	India
KRAKATAU POS-CHEM DONG-SUH CHEMICAL(*1)	Chemical by-product manufacturing and sales	19.00	19.00	Indonesia
9404-5515 Quebec Inc.(*1)	Investments management	10.40	10.40	Canada
Hamparan Mulya	Resource development	45.00	45.00	Indonesia
POS-SEAHSTEELWIRE(TIANJIN)CO.,Ltd.	Steel manufacturing and sales	25.00	25.00	China
Eureka Moly LLC	Raw material manufacturing and sales	20.00	20.00	USA
PT. Batutua Tembaga Raya(*4)	Raw material manufacturing and sales	-	22.00	Indonesia
KIRIN VIETNAM CO., LTD(*1)	Panel manufacturing	19.00	19.00	Vietnam
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	Steel processing and sales	25.00	25.00	China
POS-SeAH Steel Wire (Thailand) Co., Ltd.	Steel manufacturing and sales	25.00	25.00	Thailand
Jupiter Mines Limited(*1)	Resource development	6.89	6.89	Australia
SAMHWAN VINA CO., LTD(*1)	Steel manufacturing and sales	19.00	19.00	Vietnam
Saudi-Korean Company for Maintenance Properties Management LLC(*1)	Building management	19.00	19.00	Saudi Arabia
NCR LLC	Coal sales	22.10	29.40	Canada
AMCI (WA) PTY LTD	Iron ore sales & mine development	49.00	49.00	Australia
SHANGHAI LANSHENG DAEWOO CORP.	Trading	49.00	49.00	China
SHANGHAI WAIGAOQIAO FREE TRADE ZONE LANSHENG DAEWOO IN'L TRADING CO., LTD.	Trading	49.00	49.00	China
General Medicines Company Ltd.	Medicine manufacturing and sales	33.00	33.00	Sudan
KOREA LNG LTD.	Gas production and sales	20.00	20.00	England
AES-VCM Mong Duong Power Company Limited	Electricity generation	30.00	30.00	Vietnam
South-East Asia Gas Pipeline Company Ltd.	Pipeline construction and management	25.04	25.04	Myanmar
GLOBAL KOMSCO Daewoo LLC	Cotton celluloid manufacturing and sales	35.00	35.00	Uzbekistan
POSCO-Poggenamp Electrical Steel Pvt. Ltd.	Steel processing and sales	26.00	26.00	India
Qingdao Pohang DGENX Stainless SteelPipeCo., Ltd	Exhaust meter manufacturing	40.00	40.00	China
SHINPOONG DAEWOO PHARMA VIETNAM CO.,LTD(*1)	Medicine production	3.42	3.42	Vietnam
ZHEJIANG HUAYOU-POSCO ESM CO., LTD	Cathode material Production	40.00	40.00	China
MONG DUONG FINANCE HOLDINGS B.V.	Financial Holdings	30.00	30.00	Netherlands
FQM Australia Holdings Pty Ltd(*2)	Non-ferrous metal Mining	30.00	-	Australia
Qingdao ZhongShou New Energy Technology Co.,Ltd (*1,2)	Artificial Graphite manufacturing	19.09	-	China
Black Rock Mining LTD(*1,2)	Mining	14.81	-	Australia

(*1) The Company has less than 20% of the voting rights; however, the Company has determined that it has significant influence because it has meaningful representation on the board of the investee.

(*2) During the year ended December 31, 2021, the entity was newly classified to associates.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

- (*3) During the year ended December 31, 2021, the entity was excluded from associates due to liquidation.
- (*4) During the year ended December 31, 2021, the entity was excluded from associates due to sale of interest, etc.
- (*5) During the year ended December 31, 2021, Metropolitan Outer Ring Expressway co., Ltd. changed its name to Pocheon-Hwado Highway Corp.

2) Joint ventures

Details of joint ventures as of December 31, 2021 and 2020 are as follows:

Investee	Category of business	Ownership (%)		Region
		2021	2020	
[Domestic]				
POSCO MITSUBISHI CARBON TECHNOLOGY	Steel processing and sales	60.00	60.00	Gwangyang
POSCO-SGI Falcon Pharmaceutic Bio Secondary Fund 1(*1)	Investment in new technologies	-	25.00	Seoul
POSCO-KB Shipbuilding Restructuring Fund	Investment in new technologies	18.75	18.75	Seoul
POSCO-NSC Venture Fund	Investment in new technologies	16.67	16.67	Seoul
PoscoPlutus Project 3rd Project fund	Investment in new technologies	5.96	5.96	Seoul
PCC Bio 2nd Fund	Investment in new technologies	19.72	19.72	Seoul
PCC Material 3rd Fund(*1)	Investment in new technologies	-	2.38	Seoul
Union PCC Portfolio Fund	Investment in new technologies	14.12	14.12	Seoul
[Foreign]				
KOBRASCO	Steel materials manufacturing and sales	50.00	50.00	Brazil
PT. POSMI Steel Indonesia	Steel processing and sales	36.69	36.69	Indonesia
CSP - Companhia Siderurgica do Pecem	Steel manufacturing and sales	20.00	20.00	Brazil
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	Steel processing and sales	25.00	25.00	China
POSCO-SAMSUNG-Slovakia Processing Center	Steel processing and sales	30.00	30.00	Slovakia
YULCHON MEXICO S.A. DE C.V.	Tube for automobile manufacturing	11.85	11.85	Mexico
Hyunson Engineering & Construction HYENCO	Construction	4.89	4.89	Algeria
POSCO E&C Saudi Arabia	Civil engineering and construction	40.00	40.00	Saudi Arabia
Pos-Austem Suzhou Automotive Co., Ltd	Automotive parts manufacturing	19.90	19.90	China
POS-InfraAuto (Suzhou) Co., Ltd	Automotive parts manufacturing	16.20	16.20	China
POS-AUSTEM YANTAI AUTOMOTIVE CO., LTD	Automotive parts manufacturing	11.10	11.10	China
POS-AUSTEM WUHAN AUTOMOTIVE CO., LTD	Automotive parts manufacturing	7.43	7.43	China
Kwanika Copper Corporation	Energy & resource development	34.04	34.04	Canada
DMSA/AMSA	Energy & resource development	3.89	4.27	Madagascar
Roy Hill Holdings Pty Ltd	Energy & resource development	12.50	12.50	Australia
POSCO-NPS Niobium LLC	Mine development	50.00	50.00	USA
HBIS-POSCO Automotive Steel Co., Ltd(*2)	Steel manufacturing and sales	50.00	-	China
POSCO(Guangdong) Automotive Steel Co., Ltd.(*2)	Vehicle steel manufacturing and sales	10.00	-	China

(*1) Excluded from joint ventures due to liquidation during the year ended December 31, 2021.

(*2) During the year ended December 31, 2021, the entity was newly classified to joint ventures.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

(f) New subsidiaries

Consolidated subsidiaries acquired or newly established during the year ended December 31, 2021 are as follows:

Company	Date of addition	Ownership (%)	Reason
Poland Legnica Sourcing Center Sp. z o.o	February 2021	100.00	New establishment
POSCO Lithium Solution Co., Ltd.	April 2021	100.00	New establishment
POSCO-HY Clean Metal Co., Ltd.	May 2021	65.00	New establishment
Consus Pf private Real Estate Fund	October 2021	66.67	New establishment
New Energy Hub	October 2021	100.00	New establishment
POSCO INTERNATIONAL E&P MALAYSIA SDN.BHD.	November 2021	100.00	New establishment
Posco Busan Newdeal Fund	December 2021	32.00	New establishment
AGPA PTE. LTD.	December 2021	100.00	New establishment
Shinan Green Energy Co., LTD	December 2021	54.53	New addition

(g) Loss of controls

Subsidiaries for which the Company has lost control during the year ended December 31, 2021 are as follows:

Company	Date of exclusion	Reason
POSCO E&C Mongolia	January 2021	Liquidation
Suncheon Eco Trans Co. Ltd	May 2021	Loss of Control due to filing for bankruptcy
POSCO AMERICA COMERCIALIZADORA S DE RL DE CV	July 2021	Merged into POSCO INTERNATIONAL MEXICO S.A. de C.V
DAESAN (CAMBODIA) Co., Ltd.	October 2021	Liquidation
POSCO(Guangdong) Automotive Steel Co., Ltd.	December 2021	Loss of Control due to contributing interests into HBIS-POSCO Automotive Steel Co. Ltd
POSCO INTERNATIONAL POWER (PNGPOM) LTD.	December 2021	Liquidation

2. Statement of Compliance

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

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

- (a) Derivatives instruments 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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

Functional and presentation currency

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

Use of estimates and judgments

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

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

(a) Judgments

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

- Note 1 - Subsidiaries, associates and joint ventures
- Note 11 - Investments in associates and joint ventures
- Note 12 - Joint operations

(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 - Inventory
- Note 11 - Investments in associates and joint ventures
- Note 14 - Property, plant and equipment, net
- Note 15 - Goodwill and other intangible assets, net
- Note 20 - Provisions
- Note 21 - Employee benefits
- Note 23 - Financial instruments
- Note 29 - Revenue – contract balances
- Note 35 - Income taxes
- Note 38 - Commitments and contingencies

(c) Measurement of fair value

The Company's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities. The Company has an established control framework with respect to the measurement of fair values. This

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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 23 - 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 consolidated financial statements are the same as those applied by the Company in its consolidated financial statements as of and for the year ended December 31, 2020.

- (a) '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. 1104 "Insurance Contracts" and K-IFRS No. 1116 "Lease")

The Company has applied 'Phase 2 Interest Rate Benchmark Reform'(K-IFRS No. 1109 "Financial Instruments," K-IFRS No. 1039 "Financial Instruments : Recognition and

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

Measurement", K-IFRS No. 1107 "Financial Instruments : Disclosures", K-IFRS No. 1104 "Insurance Contracts" and K-IFRS No. 1116 "Lease") for the first time for the reporting period commenced January 1, 2021. The Company has applied the amendments retrospectively.

However the Company did not restate the comparative financial statements for 2020 according to the transitional provisions in the amendments and the adoption of the amendments did not have any impact on the beginning balance of retained earnings.

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.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

3. Summary of Significant Accounting Policies

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

Basis of consolidation

(a) Business combinations

The Company accounts for business combinations using the acquisition method when the acquired set of activities and assets meets the definition of a business and control is transferred to the Company. In determining whether a particular set of activities and assets is a business, the Company assesses whether the set of assets and activities acquired includes, at a minimum, an input and substantive process and whether the acquired set has the ability to produce outputs.

The Company has an option to apply a 'concentration test' that permits a simplified assessment of whether an acquired set of activities and assets is not a business. The optional concentration test is met if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets.

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

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

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

(b) Non-controlling interests

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(c) Subsidiaries

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

(d) Loss of control

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

(e) Interests in equity-accounted investees

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

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

(f) Transactions eliminated on consolidation

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

Foreign currency transactions and translation

(a) Foreign currency transactions

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

(b) Foreign operations

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

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

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

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

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

Cash and cash equivalents

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

effective interest method, gains and losses from foreign currency translation and impairment losses are recognized in profit or loss and other net profit or loss is 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 or 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) Offsetting a financial asset and a financial liability

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

Inventories

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

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

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

Non-current assets held for sale

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

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

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

Investment property

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

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

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

Property, plant and equipment

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

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

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

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

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

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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 and comparative periods are as follows:

Buildings	5-50 years
Structures	4-50 years
Machinery and equipment	4-25 years
Vehicles	3-20 years
Tools	3-10 years
Furniture and fixtures	3-20 years
Lease assets	2-30 years
Bearer plants	20 years

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

Borrowing costs

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

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

Intangible assets

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

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

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

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

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

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

Exploration for and evaluation of mineral resources

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

(a) Exploration and evaluation assets

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(b) Development assets

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

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

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 or 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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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 or loss if the carrying amount of the right-of-use asset has been reduced to zero. The lease liability is remeasured when there is:

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

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

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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. To 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 classifies these leases as operating leases.

The Company provides subleases certain leased vessels and others.

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 effort. This includes both quantitative and qualitative information and analysis, based on the Company's historical experience and informed credit assessment

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

- 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. Goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, are tested for impairment annually by comparing their recoverable amount to their carrying amount.

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

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

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

Goodwill acquired in a business combination is allocated to each CGU that is expected to benefit from the synergies arising from the goodwill acquired. Any impairment identified at the CGU level will first reduce the carrying amount of goodwill and then be used to reduce the carrying amount of the other assets in the CGU on a pro rata basis. Except for impairment losses in respect of goodwill which are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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, including hedge accounting

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

(a) Hedge accounting

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

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

① Fair value hedge

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

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

② Cash flow hedge

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

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

to occur, then the balance in other comprehensive income is recognized immediately in profit or loss.

(b) Other derivatives

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

Non-derivative financial liabilities

The Company classifies non-derivative financial liabilities into financial liabilities 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 consolidated statement of financial position when the Company becomes a party to the contractual provisions of the financial liability.

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

A financial liability is classified as at fair value through profit or loss if it is classified as held-for-trading, it is a derivative or it is designated as such on initial recognition. Subsequent to initial recognition, financial liabilities at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss. Upon initial recognition, transaction costs that are directly attributable to the acquisition are recognized in profit or loss as incurred.

(b) Financial liabilities measured at amortized cost

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

(c) Derecognition of financial liabilities

The Company derecognizes a financial liability when its contractual obligations are discharged or cancelled, or expired. 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.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

Construction work in progress

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

The Company accounts for the remaining rights and performance obligation on the contract with the customers on a net basis. Due from customers for contract work and due to customers for contract work for same contract are offset and presented on a net basis.

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

(c) Retirement benefits: Defined contribution plans

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(d) Retirement benefits: Defined benefit plans

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

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

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

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

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

Provisions

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

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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.

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

If the estimated total contract cost of the construction contract exceeds the total contract revenue, the estimated contract cost exceeding the contract revenue is recognized as a provision for construction losses in the remaining contract for which construction has not proceeded.

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

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

Emission Rights

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

(a) Greenhouse Gases Emission Right

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

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

(b) Emission liability

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(a) Sale of good

The goods sold by the Company consist mainly of steel products from the steel segment and products such as steel, chemicals, auto parts and machinery in the trade segment.

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.

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.

The Company provides certain discount when the customer prepays according to the payment terms. The Company recognized revenue only to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when discount period expires.

(b) Transportation service

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

(c) Construction contracts

In the case of construction contracts where the Company renders construction services for plants, etc., the customer controls the assets as they are being constructed. This is because under those contracts, the Company is able to perform construction or design services to meet the customer's specifications, and if a contract is terminated by the customer, the Company is entitled to reimbursement of all costs incurred to date, including a reasonable margin. When the contract can be reliably estimated, the company recognizes the contract revenue and contract cost as revenue and costs based on the progress of the contract activity as of the end of the reporting period. The percentage of completion is determined based on the proportion that contract costs incurred for work performed excluding contract cost incurred that do not reflect the stage of completion to date bear to the estimated total contract costs.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

If the outcome of the contract cannot be reliably estimated, the revenue is recognized only to the extent of the contract costs that are probable to be recovered. If the total contract cost is likely to exceed the total contract revenue, expected losses are immediately recognized as a cost.

The Company issues an invoice when the customer has completed a progress confirmation and generally the payment is due within 45 days from the invoice date.

(d) Certain construction contracts for apartments

For certain construction service contracts for apartments where the criterion of an enforceable right to payment for performance is met under K-IFRS No. 1115, even if the legal ownership or physical occupancy of the incomplete construction is not transferred to the customer during the construction period, revenue is recognized based on percentage of completion by considering the terms and conditions described in the relevant law and contracts such as the guarantee for sale policy, government approval on business plan, payment and termination terms. For certain construction contracts for apartments and shopping centers where the criterion of an enforceable right to payment for performance is not met during the construction period, the Company recognizes revenue upon completion of construction when the control of the apartments and shopping centers are transferred to customers.

In the meantime, the billing point and settlement terms of the pre-sale contract differ depending on the contract terms.

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;
- hedge ineffectiveness recognized in profit or loss; and
- 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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

- 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 taxes

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

The Company recognizes interest and penalties related to corporate 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 income tax

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

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 income tax

The measurement of deferred income tax liabilities and deferred tax assets reflects the tax consequences that would follow from the manner in which the Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities. The Company recognizes a deferred income tax liability for all taxable temporary differences associated with investments in subsidiaries, associates, and joint ventures, except to the extent that the Company is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. The Company recognizes a deferred income tax asset for

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

Deferred income tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. Deferred income tax assets and liabilities are offset only if there is a legally enforceable right to offset the related current income tax liabilities and assets, and they relate to income taxes levied by the same tax authority and they intend to settle current income tax liabilities and assets on a net basis.

Earnings per share

Management calculates basic earnings per share ("EPS") data for POSCO's 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 POSCO 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.

Segment Reporting

Information of each operating segment is reported in a manner consistent with the internal business segment reporting provided to the chief operating decision-maker (Note 40). Operating results are regularly reviewed by the Company's chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

and for which discrete financial information is available.

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 consolidated financial statements.

(a) K-IFRS No. 1016 "Property, Plant and Equipment"

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

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

The definition of assets and liabilities to be recognized is amended to refer to the revised conceptual framework for financial reporting. However, the amendments add an exception which allows K-IFRS No. 1037 "Provisions, contingent liabilities and contingent assets" and K-IFRS No. 2121 "Levies" to be applied to the liabilities and contingent liabilities included in the scope of these standards. The amendments also clarify that contingent assets should not be recognized at the acquisition date. The amendments should be applied for annual periods beginning on or after January 1, 2022, and earlier application is permitted. The Company does not expect the effect of the amendments to the consolidated financial statements to be significant.

(c) K-IFRS No. 1037 (Provisions, Contingent Liabilities and Contingent Assets) — Onerous Contracts : Cost of Fulfilling a Contract

The amendments clarify that the direct costs of fulfilling a contract include both the incremental costs of fulfilling the contract and an allocation of other costs directly related to fulfilling contracts when assessing whether the contract is onerous. 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 consolidated financial statements to be significant.

(d) 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 that the debtor's right to defer settlement of the liability does not

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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.

(e) K-IFRS No. 1012 “Income Tax” – Deferred Tax related to Assets and Liabilities arising from a Single Transaction

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 even 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.

4. Financial risk management

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

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

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

(a) Financial risk management

1) Risk management framework

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

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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 oversees new transactions with financial institutions with whom the Company has no previous relationship.

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

3) Liquidity risk

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

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

4) Market risk

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

① Currency risk

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

② Interest rate risk

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

③ 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 a result of the reform, Korea Overnight Financing Repo Rate (KOFR) has been selected as the benchmark for the domestic CD rate, which has been published by Korea Securities since November 26, 2021. The details of when and how to KOFR are unclear.

The Company plans to modify the clause in a contract or change the LIBOR rate to alternative benchmark rate for the financial instruments for which LIBOR settings are not yet ceased to be published. The market trend of CD rate related financial

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

instruments is monitored, and if needed, the Company plans to modify the clause in the contract or change the interest rate from CD rate to KOFR.

As of December 31, 2021, the financial instruments with USD LIBOR and CD rate as the benchmark rates are mostly associated with interest rate benchmark reform risk. The Company is exposed to a variety of risks: legal risk, process risk, and operational risk, due to the modification of contract. In addition, the Company is exposed to risk associated with monitoring the market trend related to alternative benchmark rate for risk management of new alternative benchmark rate and establishing appropriate risk management strategy.

The Company monitors and manages its transition to alternative rates. The Company evaluates the extent to which contracts reference IBOR cash flows, whether such contracts will need to be amended as a result of IBOR reform and how to manage communications about IBOR reform with counterparties.

As of December 31, 2020, USD LIBOR and CD floating rate loans, borrowings, and derivatives are exposed to interest rate benchmark reform risk. For some USD LIBOR floating rate financial instruments, the Company completed the modification of contracts by December 31, 2021. The termination of the publication of USD LIBOR date is expected to be June 30, 2023 but is subject to change. The Company plans to replace USD LIBOR with SOFR immediately after cessation.

In July 2019, changes related to the methodologies to determine Euribor were made and Belgium Financial Services and Markets Authority granted the continuity of Euribor usage based on the European Union Benchmark Regulation. The Company did not make a transition from Euribor to alternative benchmark rate, and expects to continue to use Euribor.

The Company manages the alternative benchmark rate transition by modifying the clause, IBOR related to uncompleted interest rate benchmark reform. The progress of transition is managed by comparing the financial instruments with transition not yet completed and financial instruments with modification of clause completed. The Company classifies the financial instruments, with IBOR as the benchmark rate, as transition not yet completed even if the clause in the contract has been modified.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

Financial instruments classified as transition not yet completed as of December 31, 2021 are as follows:

Category(*5)	USD LIBOR (*3)		OTHER LIBOR (*4)	
	Transition not yet completed	Modification of clause completed	Transition not yet completed	Modification of clause completed
Non-derivative financial assets (*1)				
Loans	₩ 4,742	-	-	-
Non-derivative financial liabilities (*1)				
Borrowings	2,328,046	18,968	51,512	51,512
Derivatives (*2)				
Interest rate swap	6,372	-	-	-
Foreign currency swap	-	-	(2,548)	(2,548)

(*1) Based on nominal amount

(*2) Based on related financial assets(liabilities) amount

(*3) Excluded financial instruments with maturity date before June 30, 2023

(*4) Financial instruments using LIBOR until the interest rate renewal

(*5) Excluded financial instruments not obligated to use alternative benchmark rate as of December 31, 2021

The USD LIBOR related financial instruments with maturity date before June 30, 2023, and transition not yet completed include borrowings of ₩1,696,750 million, loans of ₩48,368 million, and derivative assets of ₩9,721 million. The transition to alternative benchmark rate is not needed as the USD LIBOR publishment will continue until maturity.

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.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

Net borrowing-to-equity ratio as of December 31, 2021 and 2020 is as follows:

<i>(in millions of Won)</i>		2021	2020
Total borrowings	₩	21,741,216	20,497,607
Less: Cash and cash equivalents		4,775,166	4,754,644
Net borrowings		16,966,050	15,742,963
Total equity		54,804,943	47,674,592
Net borrowings-to-equity ratio		30.96%	33.02%

5. Cash and Cash Equivalents

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

<i>(in millions of Won)</i>		2021	2020
Cash	₩	8,940	3,100
Demand deposits and checking accounts		2,310,431	2,344,259
Time deposits		947,904	1,108,111
Other cash equivalents		1,507,891	1,299,174
	₩	4,775,166	4,754,644

As of December 31, 2021, cash and cash equivalents amounting to ₩1,819 million of subsidiaries of the Company, such as POSCO E&C CHINA Co., Ltd., is restricted.

6. Trade Accounts and Notes Receivable

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

<i>(in millions of Won)</i>		2021	2020
Current			
Trade accounts and notes receivable	₩	9,266,729	7,471,916
Finance lease receivables		126	41,841
Due from customers for contract work		1,110,082	948,879
Less: Allowance for doubtful accounts		(314,955)	(342,017)
	₩	10,061,982	8,120,619
Non-current			
Trade accounts and notes receivable	₩	113,370	131,010
Finance lease receivables		-	46
Less: Allowance for doubtful accounts		(50,165)	(44,633)
	₩	63,205	86,423

The Company sold trade accounts and notes receivable with recourse to financial

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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 December 31, 2020, the carrying amounts of such secured borrowings are ₩ 270,101 million and ₩ 328,807 million, respectively, which are presented in the statements of financial position as short-term borrowings.

(b) Finance lease receivables are as follows:

(in millions of Won)

Customer	Leased items	2021	2020
Rental contractor (executives and employees)	Songdo rental apartment contract	₩ 75	41,624
ZHAOHUUI PROSPERITY INT'L LTD	Office lease	51	263
		₩ 126	41,887

(c) As of December 31, 2021 and 2020, the Company's total lease investment and net lease investment are as follows:

(in millions of Won)

	2021	2020
Less than 1 year	₩ 126	41,847
1 year - 3 years		47
Undiscounted lease payments	126	41,894
Unrealized finance income	-	(7)
Net Investment in the lease	₩ 126	41,887

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

7. Other Receivables

(a) The details of other receivables as of December 31, 2021 and 2020, are as follows:

<i>(in millions of Won)</i>		2021	2020
Current			
Loans	₩	331,692	258,735
Other accounts receivable		1,305,383	835,791
Accrued income		350,301	298,157
Deposits		130,011	82,884
Others		17,706	18,015
Lease receivables		63,568	68,198
Less: Allowance for doubtful accounts		(94,051)	(67,541)
	₩	<u>2,104,610</u>	<u>1,494,239</u>
Non-current			
Loans	₩	884,990	798,287
Other accounts receivable		196,018	197,304
Accrued income		121,041	86,920
Deposits		390,971	284,588
Lease receivables		80,317	128,366
Less: Allowance for doubtful accounts		(258,194)	(299,503)
	₩	<u>1,415,143</u>	<u>1,195,962</u>

(b) The details of lease receivables are as follows:

Customer	Leased items	2021	2020
HEUNG-A SHIPPING CO., LTD., HEUNG-A LINE CO., LTD., MSC KOGAS, ONGC Videsh Limited, GAIL(India) Limited, Myanmar Oil and Gas Enterprise	6 Container Ships, 4 Tankers Helicopter, Ship, Office, Jetty	₩ 153,395 23,679 ₩ <u>177,074</u>	166,077 30,487 <u>196,564</u>

(c) As of December 31, 2021 and 2020, total lease investment and net lease investment are as follows:

<i>(in millions of Won)</i>		2021	2020
Less than 1 year	₩	68,782	70,378
1 year - 3 years		55,270	101,049
3 years - 5 years		5,388	28,922
Over 5 years		52,634	9,969
Undiscounted lease payments		<u>182,074</u>	<u>210,318</u>
Unrealized interest income		(5,000)	(13,754)
Present value of minimum lease payment	₩	<u>177,074</u>	<u>196,564</u>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

8. Other Financial Assets

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

(in millions of Won)

	2021	2020
Current		
Derivatives assets	₩ 66,558	99,324
Debt securities	157,895	154,154
Deposit instruments(*1,2)	2,709,171	2,322,327
Short-term financial instruments(*2)	10,514,093	9,133,404
	₩ 13,447,717	11,709,209
Non-current		
Derivatives assets	₩ 182,538	18,551
Equity securities(*3)	1,466,061	1,120,968
Debt securities	3,968	20,260
Other securities(*3)	430,998	364,404
Deposit instruments(*2)	36,109	37,624
	₩ 2,119,674	1,561,807

(*1) As of December 31, 2021 and 2020, ₩4,314 million and ₩4,881 million, respectively, are restricted in use for a government project.

(*2) As of December 31, 2021 and 2020, financial instruments amounting to ₩83,738 million and ₩46,855 million, respectively, are restricted in use for financial arrangements, pledge and others.

(*3) As of December 31, 2021 and 2020, ₩189,198 million and ₩113,674 million of equity and other securities, respectively, have been provided as collateral for borrowings, construction projects and others.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

9. Inventories

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

<i>(in millions of Won)</i>		2021	2020
Finished goods	₩	2,583,191	1,285,552
Merchandise		1,326,736	751,245
Semi-finished goods		2,902,717	1,626,855
Raw materials		3,777,112	1,980,518
Fuel and materials		917,906	876,593
Construction inventories		716,446	936,813
Materials-in-transit		3,051,786	1,664,770
Others		101,133	61,086
		<u>15,377,027</u>	<u>9,183,432</u>
Less: Allowance for inventories valuation		<u>(161,929)</u>	<u>(131,642)</u>
	₩	<u>15,215,098</u>	<u>9,051,790</u>

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

<i>(in millions of Won)</i>		2021	2020
Beginning	₩	131,642	216,143
Loss on valuation of inventories		78,783	54,014
Utilization on sale of inventories		(49,528)	(132,707)
Others		1,032	(5,808)
Ending	₩	<u>161,929</u>	<u>131,642</u>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

10. Assets Held for Sale

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

(in millions of Won)

	2021			2020		
	The controlling company(*1,2,3,4)	Subsidiaries(*7)	Total	The controlling company(*3)	Subsidiaries	Total
Asset						
Cash and cash equivalents(*5)	₩ -	554	554	-	934	934
Account receivables and other receivables	-	956	956	-	273	273
Investment stock in joint ventures(*6)	-	13,044	13,044	-	-	-
Tangible assets	29,236	30,995	60,231	32,244	40	32,284
Intangible assets	553	2,977	3,530	-	-	-
Others	-	155	155	-	719	719
	₩ 29,789	48,681	78,470	32,244	1,966	34,210
Liability						
Others	₩ 185	4	189	-	25	25

- (*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 asset held for sale and the Company recognized ₩43,760 million of gain on disposal.
- (*2) During the year ended December 31, 2021, the Company decided to trade and exchange the emission rights and reclassified the emission rights to assets held for sale. After that, the Company recognized ₩1,316 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 ₩5,030 million of impairment loss for the difference between the fair value less cost 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.
- (*5) Cash and cash equivalents in the statement of cash flows include cash and cash equivalents that are classified as assets held for sale as of December 31, 2021 and 2020.
- (*6) During the year ended December 31, 2021, the Company decided to dispose of interests of POSCO(Guangdong) Automotive Steel Co, Ltd. which is classified investment in joint ventures as asset held for sale for ₩13,044 million.
- (*7) The Company decided to dispose tangible/intangible assets of HUME COAL PTY LTD, a subsidiary, and classified as assets held for sale for ₩33,972 million.

11. Investments in Associates and Joint ventures

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

(in millions of Won)

	2021	2020
Investments in associates	₩ 2,203,274	1,732,833
Investments in joint ventures	2,311,373	2,143,416
	₩ 4,514,647	3,876,249

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(b) Details of investments in associates as of December 31, 2021 and 2020 are as follows:

(in millions of Won)

Company	2021			2020	
	Number of shares	Ownership (%)	Acquisition cost	Book value	Book value
[Domestic]					
EQP POSCO Global NO1 Natural Resources Private Equity Fund	178,691,901,565	42.82	₩ 178,787	₩ 176,136	175,939
Samcheok Blue Power Co.,Ltd.(*1)	4,507,138	34.00	429,904	382,887	145,092
SNNC	18,130,000	49.00	90,650	171,332	160,332
QSONE Co.,Ltd.	200,000	50.00	84,395	86,058	86,004
Chun-cheon Energy Co., Ltd.(*1)	17,308,143	49.10	86,541	9,571	23,913
Western Inland highway Co.,Ltd.	10,988,115	20.39	54,941	53,563	45,070
NEXTRAIN Co., Ltd.(*2)	-	-	-	-	47,364
Pocheon-Hwado Highway Corp. (formerly, Metropolitan Outer Ring Expressway co., Ltd.)(*1)	5,878,095	23.27	29,390	28,813	13,721
CHUNGJU ENTERPRISE CITY DEVELOPMENT Co.,Ltd	2,008,000	29.53	10,040	19,191	17,137
Daesung Steel(*3)	108,038	17.54	14,000	19,073	16,990
PCC Amberstone Private Equity Fund 1(*3)	8,375,982,634	8.80	8,258	9,251	9,230
Others (57 companies)(*1)				107,035	103,472
				<u>1,062,910</u>	<u>844,264</u>
[Foreign]					
South-East Asia Gas Pipeline Company Ltd.	135,219,000	25.04	132,907	238,601	199,342
AES-VCM Mong Duong Power Company Limited(*1)	-	30.00	164,303	182,639	158,777
9404-5515 Quebec Inc.(*3)	114,452,000	10.40	124,341	135,738	123,296
FQM Australia Holdings Pty Ltd(*4)	186,000,030	30.00	109,568	91,052	-
Eureka Moly LLC	-	20.00	240,123	13,633	43,520
AMCI (WA) PTY LTD	49	49.00	209,664	67,972	71,732
NCR LLC	-	22.10	98,737	102,319	46,608
KOREA LNG LTD.	2,400	20.00	135,205	31,340	42,229
Nickel Mining Company SAS	3,234,698	49.00	157,585	48,249	40,890
ZHEJIANG HUAYOU-POSCO ESM CO., LTD	134,400,000	40.00	22,423	22,769	22,147
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	10,200,000	34.00	9,517	19,099	15,181
PT. Wampu Electric Power(*1)	8,708,400	20.00	10,054	15,851	12,716
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	50	25.00	4,723	9,140	7,110
Others (27 companies)(*1)				161,962	105,021
				<u>1,140,364</u>	<u>888,569</u>
				<u>₩ 2,203,274</u>	<u>1,732,833</u>

- (*1) As of December 31, 2021 and 2020, investments in associates amounting to ₩629,832 million and ₩410,573 million, respectively, are provided as collateral in relation to the associates' borrowings.
- (*2) During the year ended December 31, 2021, investment in this associate was transferred to financial assets at fair value through other comprehensive income due to decline in ownership upon capital increase in the associate in which the Company did not participate.
- (*3) 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.
- (*4) During the year ended December 31, 2021, the Company acquired shares of FQM Australia Holdings Pty Ltd and classified the investment as investment in an associate

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(c) Details of investments in joint ventures as of December 31, 2021 and 2020 are as follows:

<i>(in millions of Won)</i>	2021				2020
	Number of shares	Ownership (%)	Acquisition cost	Book value	Book value
[Domestic]					
POSCO MITSUBISHI CARBON TECHNOLOGY	11,568,000	60.00	₩ 115,680	₩ 169,838	153,457
Others (5 companies)				6,676	14,014
				<u>176,514</u>	<u>167,471</u>
[Foreign]					
Roy Hill Holdings Pty Ltd(*1)	13,117,972	12.50	1,528,672	1,346,712	1,418,056
POSCO-NPS Niobium LLC	325,050,000	50.00	364,609	393,793	353,725
KOBRASCO	2,010,719,185	50.00	32,950	68,296	54,400
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	-	25.00	61,961	107,650	91,270
DMSA/AMSA(*1,2)	-	3.89	346,880	24,144	31,104
CSP - Companhia Siderurgica do Pecem	1,578,377,432	20.00	676,060	52,257	-
HBIS-POSCO Automotive Steel Co., Ltd(*3)	-	50.00	109,057	110,769	-
Others (11 companies)				31,238	27,390
				<u>2,134,859</u>	<u>1,975,945</u>
				<u>₩ 2,311,373</u>	<u>2,143,416</u>

(*1) As of December 31, 2021 and December 31, 2020, the investments in joint ventures are provided as collateral in relation to the joint ventures' borrowings.

(*2) All of the shareholders of the joint venture entered into supplemental funding agreement to extend the maturity of the loans to the joint venture by the lenders. However, the Company believed the shareholders' supplemental funding agreement was invalid and was in arbitration process for annulment. Pursuant to the final judgement from the arbitration, the Company received a refund of the previously provided supplement funding which was subsequently converted to shares. Upon receipt of such capital distribution, the Company recognized decrease in the investment on joint venture, which also resulted in decrease in the Company's ownership in the investee.

(*3) 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. Meanwhile, the residual interests in POSCO(Guangdong) Automotive Steel Co., Ltd owned by POSCO-China Holding Corp. which is a subsidiary are classified as assets held for sale.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

(d) The movements of investments in associates and joint ventures for the years ended December 31, 2021 and 2020 were as follows:

1) For the year ended December 31, 2021

(in millions of Won)

Company	December 31, 2020 Book value	Acquisition	Dividends	Share of profits (losses)	Other increase (decrease)(*1)	December 31, 2021 Book value
[Domestic]						
EQP POSCO Global NO1 Natural Resources Private Equity Fund	₩ 175,939	-	-	197	-	176,136
Samcheok Blue Power Co., Ltd.	145,092	250,495	(405)	(4,248)	(8,047)	382,887
SNNC	160,332	-	(18,243)	29,314	(71)	171,332
QSONE Co., Ltd.	86,004	-	(1,140)	1,194	-	86,058
Chun-cheon Energy Co., Ltd.	23,913	-	-	(15,094)	752	9,571
Western Inland highway CO., LTD.	45,070	4,031	-	(1,981)	6,443	53,563
NEXTRAIN Co., Ltd.	47,364	-	-	(127)	(47,237)	-
Pocheon-Hwado Highway Corp. (formerly, Metropolitan Outer Ring Expressway co., Ltd.)	13,721	13,954	-	(2,679)	3,817	28,813
CHUNGJU ENTERPRISE CITY DEVELOPMENT Co., Ltd.	17,137	-	-	2,054	-	19,191
Daesung Steel	16,990	-	-	2,083	-	19,073
PCC Amberstone Private Equity Fund 1	9,230	-	(674)	977	(282)	9,251
POSCO MITSUBISHI CARBON TECHNOLOGY	153,457	-	-	16,243	138	169,838
Others (62 companies)	117,486	38,021	(7,159)	6,399	(41,036)	113,711
	<u>1,011,735</u>	<u>306,501</u>	<u>(27,621)</u>	<u>34,332</u>	<u>(85,523)</u>	<u>1,239,424</u>
[Foreign]						
South-East Asia Gas Pipeline Company Ltd.	199,342	-	(27,828)	48,159	18,928	238,601
AES-VCN Mong Duong Power Company Limited	158,777	-	(28,623)	35,959	16,526	182,639
9404-5515 Quebec Inc.	123,296	-	(16,999)	18,071	11,370	135,738
FQM Australia Holdings Pty Ltd	-	109,568	-	(17,997)	(519)	91,052
Eureka Moly LLC	43,520	-	-	(32,607)	2,720	13,633
AMCI (WA) PTY LTD	71,732	-	-	(5,986)	2,226	67,972
NCR LLC	46,608	44,797	-	(2,016)	12,930	102,319
KOREA LNG LTD.	42,229	-	(9,178)	9,145	(10,856)	31,340
Nickel Mining Company SAS	40,890	-	-	7,243	116	48,249
ZHEJIANG HUAYOU-POSCO ESM CO., LTD	22,147	-	-	(1,838)	2,460	22,769
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd.	15,181	-	-	1,752	2,166	19,099
PT. Wampu Electric Power	12,716	-	-	1,389	1,746	15,851
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	7,110	-	-	675	1,355	9,140
Roy Hill Holdings Pty Ltd	1,418,056	-	(522,947)	392,887	58,716	1,346,712
POSCO-NPS Niobium LLC	353,725	-	(20,479)	28,729	31,818	393,793
KOBRASCO	54,400	-	(39,059)	52,118	837	68,296
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	91,270	-	-	6,291	10,089	107,650
DMSA/AMSA	31,104	-	-	674	(7,634)	24,144
CSP - Companhia Siderurgica do Pecem	-	19,176	-	22,398	10,683	52,257
HBIS-POSCO Automotive Steel Co., Ltd	-	109,057	-	1,636	76	110,769
Others (38 companies)	132,411	12,184	(4,713)	48,555	4,763	193,200
	<u>2,864,514</u>	<u>294,782</u>	<u>(669,826)</u>	<u>615,237</u>	<u>170,516</u>	<u>3,275,223</u>
₩	<u>3,876,249</u>	<u>601,283</u>	<u>(697,447)</u>	<u>649,569</u>	<u>84,993</u>	<u>4,514,647</u>

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

2) For the year ended December 31, 2020

(in millions of Won)

	December 31, 2019			December 31, 2020		
Company	Book value	Acquisition	Dividends	Share of profits (losses)	Other increase (decrease)(*1)	Book value
[Domestic]						
EQP POSCO Global NO1 Natural Resources Private Equity Fund	₩ 175,907	-	-	34	(2)	175,939
Samcheok Blue Power Co.,Ltd.	161,280	-	-	(5,262)	(10,926)	145,092
SNNC	142,602	-	(2,901)	18,701	1,930	160,332
QSONE Co.,Ltd.	85,887	-	(1,140)	1,257	-	86,004
Chun-cheon Energy Co., Ltd	56,679	-	-	(33,173)	407	23,913
Western Inland highway CO.,LTD.	5,115	42,246	-	(2,294)	3	45,070
NEXTRAIN Co., Ltd.	41,447	7,910	-	(2,786)	793	47,364
Pocheon-Hwado Highway Corp. (formerly, Metropolitan Outer Ring Expressway co., ltd.)	8,343	5,573	-	(195)	-	13,721
CHUNGJU ENTERPRISE CITY DEVELOPMENT Co.,Ltd	17,824	-	-	(687)	-	17,137
Daesung Steel	15,375	-	-	(514)	2,129	16,990
PCC Amberstone Private Equity Fund 1	9,570	-	(715)	589	(214)	9,230
POSCO MITSUBISHI CARBON TECHNOLOGY	182,648	-	(19,401)	(9,794)	4	153,457
Others (65 companies)	135,890	22,145	(1,328)	(28,128)	(11,093)	117,486
	1,038,567	77,874	(25,485)	(62,252)	(16,969)	1,011,735
[Foreign]						
South-East Asia Gas Pipeline Company Ltd.	225,933	-	(56,760)	45,941	(15,772)	199,342
AES-VCM Mong Duong Power Company Limited	178,892	-	(16,053)	37,092	(41,154)	158,777
9404-5515 Quebec Inc.	131,529	-	(11,672)	10,963	(7,524)	123,296
Eureka Moly LLC	85,349	-	-	(39,801)	(2,028)	43,520
AMCI (WA) PTY LTD	72,937	-	-	(6,561)	5,356	71,732
NCR LLC	46,391	4,196	-	(1,452)	(2,527)	46,608
KOREA LNG LTD.	46,557	-	(7,755)	7,681	(4,254)	42,229
Nickel Mining Company SAS	37,940	-	-	1,473	1,477	40,890
ZHEJIANG HUAYOU-POSCO ESM CO., LTD	22,356	-	-	(384)	175	22,147
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	15,128	-	-	(80)	133	15,181
PT. Wampu Electric Power	13,363	-	(559)	1,411	(1,499)	12,716
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	6,755	-	-	279	76	7,110
Roy Hill Holdings Pty Ltd	1,235,682	-	(113,985)	234,693	61,666	1,418,056
POSCO-NPS Niobium LLC	376,410	-	(11,244)	11,449	(22,890)	353,725
KOBRASCO	115,641	-	(37,922)	8,443	(31,762)	54,400
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	88,935	-	-	1,790	545	91,270
DMSA/AMSA	12,189	60,278	-	(33,305)	(8,058)	31,104
CSP - Compania Siderurgica do Pecem	-	62,711	-	(60,708)	(2,003)	-
Others (37 companies)	177,201	-	(12,114)	(23,375)	(9,301)	132,411
	2,889,188	127,185	(268,064)	195,549	(79,344)	2,864,514
₩	3,927,755	205,059	(293,549)	133,297	(96,313)	3,876,249

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(e) Summarized financial information of associates and joint ventures as of and for the years ended December 31, 2021 and 2020 are as follows:

1) December 31, 2021

(in millions of Won)

Company	Assets	Liabilities	Equity (deficit)	Sales	Net income (loss)
[Domestic]					
EQP POSCO Global NO1 Natural Resources Private Equity Fund	₩ 400,339	574	399,765	-	5,411
Samcheok Blue Power Co., Ltd.	2,301,783	1,620,752	681,031	-	(6,226)
SNNC	628,075	236,726	391,349	869,815	75,125
QSONE Co., Ltd.	251,158	79,042	172,116	17,962	2,388
Chun-cheon Energy Co., Ltd.	616,111	528,683	87,428	327,534	(5,424)
Western Inland highway CO., LTD.	305,166	42,052	263,114	-	(2,137)
Pocheon-Hwado Highway Corp. (formerly, Metropolitan Outer Ring Expressway co., Ltd.)	217,888	95,005	122,883	-	(929)
CHUNGJU ENTERPRISE CITY DEVELOPMENT Co., Ltd.	56,418	21,740	34,678	45,543	6,957
Daesung Steel	176,458	99,112	77,346	113,706	11,868
PCC Amberstone Private Equity Fund 1	105,169	-	105,169	11,910	11,110
POSCO MITSUBISHI CARBON TECHNOLOGY	470,330	185,622	284,708	172,441	28,699
[Foreign]					
South-East Asia Gas Pipeline Company Ltd.	1,604,624	651,751	952,873	439,974	192,322
AES-VCM Mong Duong Power Company Limited	1,677,096	1,084,900	592,196	366,205	119,863
9404-5515 Quebec Inc.	1,317,335	3	1,317,332	-	173,763
FQM Australia Holdings Pty Ltd	1,348,138	1,021,630	326,508	243,611	(64,143)
KOREA LNG LTD.	157,060	357	156,703	47,843	45,724
Nickel Mining Company SAS	475,751	307,570	168,181	328,570	31,688
ZHEJIANG HUAYOU-POSCO ESM CO., LTD	129,618	72,965	56,653	28,488	(4,680)
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	92,850	31,260	61,590	174,511	5,193
PT. Wampu Electric Power	209,172	132,917	76,255	20,288	6,946
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	89,809	54,517	35,292	117,461	2,595
Roy Hill Holdings Pty Ltd	9,165,759	2,227,659	6,938,100	8,839,084	3,740,696
POSCO-NPS Niobium LLC	787,383	-	787,383	-	52,451
KOBRASCO	194,022	57,430	136,592	165,224	104,507
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	727,958	324,222	403,736	2,044,978	25,165
DMSA/AMSA	3,631,856	2,068,847	1,563,009	749,634	636,113
CSP - Companhia Siderurgica do Pecem	3,777,391	3,542,398	234,993	2,570,010	653,370
HBIS-POSCO Automotive Steel Co., Ltd	502,645	261,765	240,880	482,696	3,272

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

2) December 31, 2020

(in millions of Won)

Company	Assets	Liabilities	Equity (deficit)	Sales	Net income (loss)
[Domestic]					
EQP POSCO Global NO1 Natural Resources Private Equity Fund	₩ 473,415	575	472,840	-	8,534
Samcheok Blue Power Co., Ltd.	1,169,343	700,266	469,077	-	(5,994)
SNNC	592,568	238,971	353,597	698,712	39,826
QSONE Co., Ltd.	251,190	79,182	172,008	17,075	2,513
Chun-cheon Energy Co., Ltd	609,815	516,963	92,852	222,066	(24,617)
Western Inland highway CO., LTD.	158,679	2,534	156,145	-	(1,714)
NEXTRAIN Co., Ltd.	303,359	74,738	228,621	-	(2,636)
Pocheon-Hwado Highway Corp. (formerly, Metropolitan Outer Ring Expressway co., Ltd.)	98,510	34,360	64,150	-	(920)
CHUNGJU ENTERPRISE CITY DEVELOPMENT Co., Ltd	54,832	27,111	27,721	6,672	(2,326)
Daesung Steel	172,088	106,611	65,477	85,158	(2,930)
PCC Amberstone Private Equity Fund 1	104,933	5	104,928	12,280	6,694
POSCO MITSUBISHI CARBON TECHNOLOGY	446,067	190,289	255,778	112,173	(15,603)
[Foreign]					
South-East Asia Gas Pipeline Company Ltd.	1,515,828	719,745	796,083	458,806	183,465
AES-VCM Mong Duong Power Company Limited	1,599,095	1,086,440	512,655	336,174	121,644
9404-5515 Quebec Inc.	1,197,702	3	1,197,699	-	105,411
KOREA LNG LTD.	211,497	353	211,144	40,086	38,370
Nickel Mining Company SAS	445,140	308,885	136,255	223,427	(8,353)
ZHEJIANG HUAYOU-POSCO ESM CO., LTD	72,001	16,812	55,189	3,236	(1,086)
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	71,805	21,486	50,319	104,537	(237)
PT. Wampu Electric Power	199,841	139,264	60,577	20,272	7,057
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	68,036	38,843	29,193	78,954	1,156
Roy Hill Holdings Pty Ltd	9,271,788	2,161,353	7,110,435	5,993,950	2,299,529
POSCO-NPS Niobium LLC	707,247	-	707,247	-	25,406
KOBRASCO	118,676	9,875	108,801	32,854	16,887
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	873,174	534,961	338,213	1,252,189	7,856
DMSA/AMSA	4,924,371	2,294,881	2,629,490	204,820	(772,396)
CSP - Companhia Siderurgica do Pecem	3,142,831	3,657,314	(514,483)	1,402,742	(623,381)

(f) Changes in accumulated losses of equity-accounted investees that were not recognized since the Company discontinued the use of the equity method for the year ended December 31, 2021 were as follows:

(in millions of Won)

Company	Beginning balance	Increase or decrease	Ending balance
New Songdo International City Development, LLC	₩ 259,341	(59,858)	199,483
Mokpo Deayang Industrial Corporation	84	(67)	17
UITrans LRT Co., Ltd.	32,334	7,769	40,103
Clean Iksan Co., Ltd.	714	83	797
HYOCHUN Co., Ltd.	3,505	332	3,837
Shinahn wind power generation	843	(843)	-
CSP - Companhia Siderurgica do Pecem	168,737	(168,737)	-
KIRIN VIETNAM CO., LTD	67	33	100
INKOTECH, INC.	341	271	612
POSCO-Poggenamp Electrical Steel Pvt. Ltd.	96	205	301
Gunggi Green Energy	-	448	448

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

12. Joint Operations

Details of significant joint operations that the Company is participating in as a party to a joint arrangement as of December 31, 2021 are as follows:

Joint operations	Operation	Ownership (%)	Location
Myanmar A-1/A-3 mine	Mine development and gas production	51.00	Myanmar
Offshore midstream	Gas transportation facility	51.00	Myanmar
Greenhills mine	Mine development	20.00	Canada
Arctos Anthracite coal project	Mine development	50.00	Canada
Mt. Thorley J/V	Mine development	20.00	Australia
POSMAC J/V	Mine development	20.00	Australia
Samcheok Thermal Power Plant EPC (Unit 1,2) Construction work	Construction	49.00	Korea
Sinansan Line Double Track Train Private Investment project construction work	Construction	32.00	Korea
Panama Metro Line 3 Project construction work	Construction	20.00	Panama
2*600 MW Matarbari Ultra Super Critical Coal-Fired Power construction work	Construction	67.00	Bangladesh
Yangsan Sasong 2nd Apartment Project (B5,6,7,9 Block) Construction work	Construction	49.00	Korea
Yangsan Sasong Apartment Project (C1,B3,B4 Block) Construction work	Construction	49.00	Korea
Songdo B5 Block officetel Project Construction work	Construction	80.00	Korea
Particle Accelerator Facility Construction work	Construction	55.00	Korea
Anyang Jinheung Apartment Construction work	Construction	45.00	Korea

13. Investment Property, Net

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

(in millions of Won)

	2021			2020		
	Acquisition cost	Accumulated depreciation and impairment loss	Book value	Acquisition cost	Accumulated depreciation and impairment loss	Book value
Land	₩ 349,026	(16,718)	332,308	296,115	(16,718)	279,397
Buildings	803,156	(218,607)	584,549	746,698	(187,114)	559,584
Structures	3,213	(2,460)	753	4,268	(3,069)	1,199
Right of use assets	196,344	(27,877)	168,467	175,026	(20,425)	154,601
	₩ 1,351,739	(265,662)	1,086,077	1,222,107	(227,326)	994,781

As of December 31, 2021, the fair value of investment property is ₩2,497,206 million.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(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

<i>(in millions of Won)</i>		Beginning	Acquisitions	Disposals	Depreciation	Others(*1)	Ending
Land	₩	279,397	83,497	(1,092)	-	(29,494)	332,308
Buildings		559,584	11,378	(2,264)	(21,362)	37,213	584,549
Structures		1,199	-	-	(598)	152	753
Right of use assets		154,601	-	-	(4,364)	18,230	168,467
	₩	<u>994,781</u>	<u>94,875</u>	<u>(3,356)</u>	<u>(26,324)</u>	<u>26,101</u>	<u>1,086,077</u>

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

2) For the year ended December 31, 2020

<i>(in millions of Won)</i>		Beginning	Acquisitions	Disposals	Depreciation(*1)	Others(*2)	Ending
Land	₩	278,465	2,814	(183)	-	(1,699)	279,397
Buildings		598,159	385	-	(9,681)	(29,279)	559,584
Structures		1,178	-	-	(610)	631	1,199
Right of use assets		425	-	(56)	(3,206)	157,438	154,601
	₩	<u>878,227</u>	<u>3,199</u>	<u>(239)</u>	<u>(13,497)</u>	<u>127,091</u>	<u>994,781</u>

(*1) Includes reversal of impairment loss on investment property recognized by POSCO(Dalian) IT Center Development Co., Ltd., a subsidiary, in relation to its office lease amounting to ₩14,953 million.

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

14. Property, Plant and Equipment, Net

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

<i>(in millions of Won)</i>		2021				2020			
		Acquisition cost	Accumulated depreciation and impairment loss	Government grants	Book value	Acquisition cost	Accumulated depreciation and impairment loss	Government grants	Book value
Land	₩	2,702,768	(53)	-	2,702,715	2,592,705	(2,618)	-	2,590,087
Buildings		9,802,539	(5,592,600)	(5,489)	4,204,450	9,417,295	(5,250,281)	(5,614)	4,161,400
Structures		6,683,546	(3,551,692)	(59)	3,131,795	6,363,370	(3,338,075)	(69)	3,025,226
Machinery and equipment		50,090,721	(33,663,244)	(7,321)	16,420,156	48,435,445	(31,570,233)	(7,905)	16,857,307
Vehicles		324,073	(277,437)	(606)	46,030	310,078	(272,705)	(217)	37,156
Tools		453,297	(375,212)	(290)	77,795	423,927	(363,360)	(266)	60,301
Furniture and fixtures		752,314	(585,881)	(271)	166,162	670,079	(542,217)	(403)	127,459
Lease assets		1,288,639	(420,893)	-	867,746	1,093,817	(320,117)	-	773,700
Bearer plants		185,234	(30,552)	-	154,682	171,160	(21,195)	-	149,965
Construction-in-progress		1,961,033	(125,620)	(10,246)	1,825,167	2,474,766	(850,839)	(6,387)	1,617,540
	₩	<u>74,244,164</u>	<u>(44,623,184)</u>	<u>(24,282)</u>	<u>29,596,698</u>	<u>71,952,642</u>	<u>(42,531,640)</u>	<u>(20,861)</u>	<u>29,400,141</u>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(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 loss(*1,2,3)	Others(*4)	Ending
Land	₩ 2,590,087	66,015	(117)	-	5,670	41,060	2,702,715
Buildings	4,161,400	22,559	(4,001)	(316,999)	(32,863)	374,354	4,204,450
Structures	3,025,226	15,728	(15,727)	(233,370)	(4,900)	344,838	3,131,795
Machinery and equipment	16,857,307	206,564	(31,769)	(2,283,704)	(77,173)	1,748,931	16,420,156
Vehicles	37,156	14,896	(832)	(15,242)	(58)	10,110	46,030
Tools	60,301	21,802	(782)	(30,864)	(69)	27,407	77,795
Furniture and fixtures	127,459	28,178	(1,630)	(47,135)	(667)	59,957	166,162
Lease assets	773,700	224,667	(8,320)	(172,443)	(1,547)	51,689	867,746
Bearer plants	149,965	-	(24,876)	(9,264)	-	38,857	154,682
Construction-in-progress	1,617,540	2,838,175	(10,789)	-	(190,556)	(2,429,203)	1,825,167
	₩ 29,400,141	3,438,584	(98,843)	(3,109,021)	(302,163)	268,000	29,596,698

(*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 accident.

(*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 ₩217,564 million of impairment loss in 2021. The remaining balances were classified as assets held for sale as of December 31, 2021.

(*3) During the year ended December 31, 2021, evidence of impairment occurred due to changes in the quality of bituminous coal and changes in production plans at Narrabri Coal Mine where POSCO INTERNATIONAL AUSTRALIA HOLDINGS PTY. LTD, a subsidiary of the Company, participates as a non-operating party. The Company recognized an impairment loss of ₩27,672 million since recoverable amounts are less than their carrying amounts.

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

2) For the year ended December 31, 2020

(in millions of Won)

		Beginning	Acquisitions	Disposals	Depreciation	Impairment loss(*1)	Others(*2)	Ending
Land	₩	2,526,059	29,639	(2,633)	-	3,490	33,532	2,590,087
Buildings		4,215,454	13,825	(6,296)	(319,774)	(3,778)	261,969	4,161,400
Structures		2,904,506	85,958	(6,661)	(231,737)	(883)	274,043	3,025,226
Machinery and equipment		17,218,264	138,533	(27,966)	(2,298,951)	(8,080)	1,835,507	16,857,307
Vehicles		32,285	6,475	(546)	(14,599)	-	13,541	37,156
Tools		70,751	20,230	(211)	(38,838)	-	8,369	60,301
Furniture and fixtures		130,132	23,352	(2,908)	(43,832)	(519)	21,234	127,459
Lease assets		774,582	204,699	(9,300)	(172,029)	-	(24,252)	773,700
Bearer plants		124,193	118	(155)	(7,971)	-	33,780	149,965
Construction-in-progress		1,929,747	2,835,921	(7,001)	-	(17,270)	(3,123,857)	1,617,540
	₩	<u>29,925,973</u>	<u>3,358,750</u>	<u>(63,677)</u>	<u>(3,127,731)</u>	<u>(27,040)</u>	<u>(666,134)</u>	<u>29,400,141</u>

(*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, reclassifications resulting from changing purpose of use, adjustments of foreign currency translation differences and others.

(c) Borrowing costs capitalized and the capitalized interest rate for the years ended December 31, 2021 and 2020 were as follows:

(in millions of Won)

		2021	2020
Weighted average expenditure	₩	1,230,145	932,298
Borrowing costs capitalized		31,295	29,653
Capitalization rate (%)		2.25 ~ 3.16	3.14 ~ 3.18

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

- (d) Property, plant and equipment and investment property pledged as collateral as of December 31, 2021 and 2020 are as follows:

(in millions of Won)

	Collateral right holder	Book value	
		2021	2020
Land	Korean Development Bank and others	₩ 933,560	867,820
Buildings and structures	Korean Development Bank and others	1,598,040	1,464,551
Machinery and equipment	Korean Development Bank and others	2,286,656	2,263,383
		₩ 4,818,256	4,595,754

As of December 31, 2021, assets pledged as collateral related to the Company's borrowings and others amounting to ₩5,637,044 million include investment properties and other assets such as right to use land.

- (e) Changes in the carrying amount of right of use assets presented as investment property and 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	Depreciation	Others	Ending
Land	₩ 371,719	14,161	(14,191)	19,757	391,446
Buildings and structures	171,760	30,912	(61,261)	2,443	143,854
Machinery and equipment	239,181	13,543	(41,721)	45,202	256,205
Vehicles	11,456	12,159	(8,657)	(205)	14,753
Ships	106,555	120,217	(16,716)	-	210,056
others	27,630	33,675	(34,261)	(7,145)	19,899
	₩ 928,301	224,667	(176,807)	60,052	1,036,213

2) For the year ended December 31, 2020

(in millions of Won)

	Beginning	Acquisitions	Depreciation	Others	Ending
Land	₩ 341,767	18,962	(16,397)	27,387	371,719
Buildings and structures	171,112	47,374	(57,593)	10,867	171,760
Machinery and equipment	215,828	86,373	(38,909)	(24,111)	239,181
Vehicles	14,105	6,186	(9,486)	651	11,456
Ships	24,082	111,537	(29,064)	-	106,555
others	8,113	45,803	(23,786)	(2,500)	27,630
	₩ 775,007	316,235	(175,235)	12,294	928,301

- (f) 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	₩ 32,331	36,373
Expenses related to short-term leases	20,885	18,809
Expenses related to leases of low-value assets	18,577	14,375
	₩ 71,793	69,557

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

15. Goodwill and Other Intangible Assets, Net

(a) Goodwill and other intangible assets as of December 31, 2021 and 2020 are as follows:

(in millions of Won)

	2021				2020			
	Acquisition cost	Accumulated amortization and impairment loss	Government grants	Book value	Acquisition cost	Accumulated amortization and impairment loss	Government grants	Book value
Goodwill	₩ 1,648,119	(912,150)	-	735,969	1,626,876	(722,983)	-	903,893
Intellectual property rights	3,987,689	(1,761,881)	-	2,225,808	3,628,121	(1,457,383)	-	2,170,738
Membership	146,043	(3,673)	-	142,370	143,403	(4,700)	-	138,703
Development expense	656,712	(502,739)	-	153,973	652,492	(425,381)	-	227,111
Port facilities usage rights	685,540	(469,519)	-	216,021	685,210	(448,938)	-	236,272
Exploration and evaluation assets	280,092	(218,135)	-	61,957	274,691	(217,551)	-	57,140
Customer relationships	865,622	(579,902)	-	285,720	865,671	(535,424)	-	330,247
Other intangible assets	1,098,320	(753,790)	(39)	344,491	1,101,595	(716,190)	(77)	385,328
	₩ 9,368,137	(5,201,789)	(39)	4,166,309	8,978,059	(4,528,550)	(77)	4,449,432

(b) The changes in carrying amount of goodwill and other 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 loss(*2,4)	Others(*3)	Ending
Goodwill	₩ 903,893	17,804	-	-	(189,167)	3,439	735,969
Intellectual property rights	2,170,738	281,544	(574)	(271,931)	(20,005)	66,036	2,225,808
Membership(*1)	138,703	7,457	(4,198)	(137)	145	400	142,370
Development expense	227,111	11,301	-	(72,294)	(4,027)	(8,118)	153,973
Port facilities usage rights	236,272	-	-	(20,581)	-	330	216,021
Exploration and evaluation assets	57,140	3,649	-	-	(374)	1,542	61,957
Customer relationships	330,247	-	-	(44,478)	-	(49)	285,720
Other intangible assets	385,328	68,253	(14,818)	(34,679)	(10,032)	(49,561)	344,491
	₩ 4,449,432	390,008	(19,590)	(444,100)	(223,460)	14,019	4,166,309

- (*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 ₩7,180 million of impairment loss since book value exceeded fair value less costs to sell.
- (*3) Represents assets transferred from construction-in-progress to intangible assets and assets transferred from property, plant and equipment, adjustments of foreign currency translation difference and others.
- (*4) During the year ended December 31, 2021, evidence of impairment has occurred due to changes in the quality of bituminous coal and changes in production plans at Narrabri Coal Mine where POSCO INTERNATIONAL AUSTRALIA HOLDINGS PTY. LTD, a subsidiary of the Company, participates as a non-operating party. The Company recognized an impairment loss of ₩20,006 million since recoverable amounts are less than their carrying amounts.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

2) For the year ended December 31, 2020

(in millions of Won)

	Beginning	Acquisitions	Disposals	Amortization	Impairment loss	Others(*2)	Ending
Goodwill	₩ 1,097,809	-	-	-	(189,379)	(4,537)	903,893
Intellectual property rights	2,279,210	136,195	(3,617)	(282,594)	(7,727)	49,271	2,170,738
Membership(*1)	148,078	3,416	(12,340)	(107)	244	(588)	138,703
Development expense	94,339	1,315	(16)	(56,329)	(206)	188,008	227,111
Port facilities usage rights	281,398	-	-	(44,893)	-	(233)	236,272
Exploration and evaluation assets	77,271	14,886	-	-	-	(35,017)	57,140
Customer relationships	374,875	-	-	(44,478)	-	(150)	330,247
Other intangible assets	555,493	159,590	(61,692)	(37,157)	-	(230,906)	385,328
	₩ 4,908,473	315,402	(77,665)	(465,558)	(197,068)	(34,152)	4,449,432

(*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, adjustments of foreign currency translation difference and others.

(c) For the purpose of impairment testing, goodwill is allocated to individual operating entities each of which is determined to be a CGU. The goodwill amounts as of December 31, 2021 and 2020 are as follows:

(in millions of Won)

Reporting segments	Total number of CGUs		CGUs		2021	2020
	2021	2020				
Steel	7	7	POSCO VST CO., LTD.	₩	36,955	36,955
			Others		12,542	12,498
Trading	3	3	POSCO INTERNATIONAL Corporation(*1)		578,046	762,816
			GRAIN TERMINAL HOLDING PTE. LTD.		21,516	23,726
			PT. Bio Inti Agrindo		7,468	6,955
E&C	2	2	POSCO ENGINEERING & CONSTRUCTION CO., LTD.		24,868	24,868
			POSCO Center Beijing		178	159
			POSCO ENERGY CO., LTD.		26,471	26,471
Others	5	4	Others		27,925	9,445
				₩	735,969	903,893
	17	16				

(*1) The recoverable amount of POSCO INTERNATIONAL Corporation, a subsidiary included in trading segment, is determined based on its value in use. As of December 31, 2021, the value in use is estimated by applying a 8.14%(2020: 6.92%) post-tax discount rate to the future cash flows estimated from management's 5-year business plan and terminal growth rate of 2.0% (2020: 1.9%) thereafter. The terminal growth rate does not exceed long-term growth rate of its industry. During the year ended December 31, 2021, impairment loss on goodwill of ₩184,770 million was recognized as the recoverable amount is less than the carrying amount of the CGU.

The Company calculated the value in use by discounting the post-tax cash flows at the post-tax discount rate, which is consistent with and materially the same as applying pre-tax discount rate of 10.56% (2020: 8.77%) to pre-tax cash flows.

The value in use of the CGU is sensitive to the assumptions such as discount rate, terminal growth and estimated revenue used in discount cash flow model. If the discount rate increases by 0.5%, the value in use would decrease by ₩188,559 million or 5.97% and if the terminal growth rate decreases by 0.5%, the value in use would decrease by ₩87,806 million or 2.78%.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

16. Other Assets

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

(in millions of Won)

		2021	2020
Current			
Advance payments	₩	564,196	348,753
Prepaid expenses		274,023	181,985
Firm commitment asset		11,323	23,506
Others		65,816	62,379
	₩	<u>915,358</u>	<u>616,623</u>
Non-current			
Long-term advance payments	₩	47,752	21,587
Long-term prepaid expenses		76,739	92,774
Others(*1)		74,116	155,699
	₩	<u>198,607</u>	<u>270,060</u>

(*1) As of December 31, 2021 and 2020, the Company recognized tax assets amounting to ₩4,722 million and ₩121,225 million, respectively, based on the Company's best estimate of the tax amounts to be refunded when the result of the Company's appeal in connection with the additional income tax payment in prior years' tax audits and claim for rectification are finalized.

17. Borrowings

(a) Short-term borrowings and current portion of long-term borrowings as of December 31, 2021 and 2020 are as follows:

(in millions of Won)

	Lenders	Issuance date	Maturity date	Interest rate (%)	2021	2020
Short-term borrowings						
Bank overdrafts	JP Morgan and others	May, 2021~ December, 2021	January, 2022~ December, 2022	0.51~5.50	₩ 118,558	146,762
Short-term borrowings	HSBC and others	January, 2021~ December, 2021	January, 2022~ December, 2022	0.17~5.35	4,991,866	5,047,633
					<u>5,110,424</u>	<u>5,194,395</u>
Current portion of long-term liabilities						
Current portion of long-term borrowings	Export-Import Bank of Korea and others	November, 2004~ April, 2015~ October, 2020	January, 2022~ December, 2022 March, 2022~ November, 2022	0.70~8.50	992,154	1,067,338
Current portion of debentures	Merrill Lynch and others	April, 2015~ October, 2020	March, 2022~ November, 2022	1.29~3.70	2,731,321	2,417,339
Less: Current portion of discount on debentures issued					(3,832)	(1,543)
					<u>3,719,643</u>	<u>3,483,134</u>
					₩ <u>8,830,067</u>	<u>8,677,529</u>

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

(in millions of Won)

	Lenders	Issuance date	Maturity date	Interest rate (%)	2021	2020
Long-term borrowings	Export-Import Bank of Korea and others	September, 2001~	February, 2023~ March, 2040	0.20~8.50	₩ 3,841,375	3,366,400
Less: Present value discount					(12,530)	(16,058)
Bonds	KB Securities co., Ltd. and others	October, 2013~ October, 2021	January, 2023~ October, 2029	0.50~4.00	7,671,755	8,505,485
Less: Discount on debentures issued					(24,644)	(35,749)
Exchangeable bonds(*1)	Foreign currency exchangeable bonds				1,435,193	-
					₩ <u>12,911,149</u>	<u>11,820,078</u>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(*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	1) 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 2) Prepayment : The issuer has call option and the bondholders have put option
Exchange rate	100%
Exchange price (Won/share)	486,539 (*)
Underlying shares exchange	Registered common shares(treasury shares)
Exchange period	From October 12, 2021 to August 22, 2026
Adjustments for exchange price	Adjusting the exchange 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, issuance of new shares 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.

(*)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.

(c) Assets pledged as collateral with regard to the borrowings as of December 31, 2021 are as follows:

<i>(in millions of Won)</i>	Lenders	Book value	Pledged amount
Property, plant and equipment and Investment property	Korea Development Bank and others	4,557,948	5,503,093
Trade accounts and notes receivable	Korea Development Bank and others	270,101	270,101
Financial instruments	KB Kookmin Bank and others	20,985	21,158
		₩ 4,849,034	5,794,352

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

18. Other Payables

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

(in millions of Won)

		<u>2021</u>	<u>2020</u>
Current			
Accounts payable	₩	1,034,823	800,439
Accrued expenses		835,226	697,087
Dividend payable		4,046	2,703
Lease liabilities		181,774	244,548
Withholdings		133,492	100,489
	₩	<u>2,189,361</u>	<u>1,845,266</u>
Non-current			
Accounts payable	₩	17,312	5,572
Accrued expenses		8,760	4,953
Lease liabilities		596,240	495,127
Long-term withholdings		56,697	53,272
	₩	<u>679,009</u>	<u>558,924</u>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

19. Other Financial Liabilities

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

<i>(in millions of Won)</i>		2021	2020
Current			
Derivative liabilities	₩	91,739	82,859
Financial guarantee liabilities		19,902	58,545
	₩	<u>111,641</u>	<u>141,404</u>
Non-current			
Derivative liabilities	₩	18,300	129,505
Financial guarantee liabilities		5,696	4,083
	₩	<u>23,996</u>	<u>133,588</u>

20. Provisions

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

<i>(in millions of Won)</i>		2021		2020	
		Current	Non-current	Current	Non-current
Provision for bonus payments	₩	93,502	45,031	73,441	48,510
Provision for construction warranties		14,519	222,141	9,662	217,435
Provision for legal contingencies and claims(*1)		24,441	69,050	24,275	63,175
Provision for the restoration(*2,3)		5,918	153,613	5,307	134,438
Others(*4,5)		261,604	99,257	330,588	59,411
	₩	<u>399,984</u>	<u>589,092</u>	<u>443,273</u>	<u>522,969</u>

- (*1) The Company recognized probable outflow of resources amounting to ₩61,911 million and ₩59,221 million as provisions for legal contingencies and asserted claims as of December 31, 2021 and 2020, respectively.
- (*2) Due to contamination of lands near the Company's magnesium smelting plant located in Gangneung province and others, the Company recognized present values of estimated costs for recovery amounting to ₩12,503 million 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 a discount rate of 2.08%~2.34% to measure present value of these costs.
- (*3) Due to contamination of river water quality near Greenhills mine owned by POSCO Canada Ltd., the Company recognized present value of estimated costs for recovery amounting to ₩81,300 million as provisions for improvement as of December 31, 2021.
- (*4) As of December 31, 2021 and 2020, POSCO ENERGY CO., LTD., and Korea Fuel Cell, recognized ₩80,727 million and ₩80,842 million of provisions for warranties, respectively, for the service contract on fuel cell based on its estimate of probable outflow of resources.
- (*5) As of December 31, 2021 and 2020, the Company has recognized emission liabilities amounting to ₩84,364 million and ₩78,646 million, respectively, for expected greenhouse gas emissions exceeding the quantity of free quota emission rights.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

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

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

1) For the year ended December 31, 2021

<i>(in millions of Won)</i>		Beginning	Increase	Utilization	Reversal	Others(*1)	Ending
Provision for bonus payments	₩	121,951	160,893	(138,003)	(4,989)	(1,319)	138,533
Provision for construction warranties		227,097	79,518	(67,196)	(3,080)	321	236,660
Provision for legal contingencies and claims		87,450	66,395	(28,400)	(32,731)	777	93,491
Provision for the restoration		139,745	29,456	(7,646)	(11,129)	9,105	159,531
Others		389,999	291,284	(185,066)	(119,633)	(15,723)	360,861
	₩	<u>966,242</u>	<u>627,546</u>	<u>(426,311)</u>	<u>(171,562)</u>	<u>(6,839)</u>	<u>989,076</u>

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

2) For the year ended December 31, 2020

<i>(in millions of Won)</i>		Beginning	Increase	Utilization	Reversal	Others(*1)	Ending
Provision for bonus payments	₩	123,669	106,855	(109,835)	(6,334)	7,596	121,951
Provision for construction warranties		170,428	86,691	(23,916)	(5,311)	(795)	227,097
Provision for legal contingencies and claims		84,484	30,894	(16,444)	(9,087)	(2,397)	87,450
Provision for the restoration		87,303	67,501	(6,525)	(15,811)	7,277	139,745
Others		352,765	349,639	(142,440)	(133,294)	(36,671)	389,999
	₩	<u>818,649</u>	<u>641,580</u>	<u>(299,160)</u>	<u>(169,837)</u>	<u>(24,990)</u>	<u>966,242</u>

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

21. Employee Benefits

(a) Defined contribution plans

The expenses related to post-employment benefit plans under defined contribution plans for the years ended December 31, 2021 and 2020 were as follows:

<i>(in millions of Won)</i>		2021	2020
Expense related to post-employment benefit plans under defined contribution plans	₩	54,527	50,694

(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:

<i>(in millions of Won)</i>		2021	2020
Present value of funded obligations	₩	2,401,261	2,439,938
Fair value of plan assets(*1)		(2,620,046)	(2,397,717)
Present value of non-funded obligations		13,770	13,415
Net defined benefit liabilities	₩	(205,015)	55,636

- (*1) As of December 31, 2021 and 2020, the Company recognized net defined benefit assets amounting to ₩255,858 million and ₩86,149 million, respectively, since there are consolidated entities whose fair value of plan assets exceeded the present value of defined benefit obligations.

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

<i>(in millions of Won)</i>		2021	2020
Defined benefit obligations at the beginning of period	₩	2,453,353	2,431,880
Current service costs		243,029	245,047
Interest costs		52,118	47,485
Remeasurements :		(78,888)	(52,732)
- Loss (gain) from change in financial assumptions		(159,154)	(76,744)
- Loss (gain) from change in demographic assumptions		1,512	27,399
- Loss (gain) from change in others		78,754	(3,387)
Benefits paid		(253,208)	(225,293)
Others		(1,373)	6,966
Defined benefit obligations at the end of period	₩	2,415,031	2,453,353

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

<i>(in millions of Won)</i>		2021	2020
Fair value of plan assets at the beginning of period	₩	2,397,717	2,255,149
Interest on plan assets		51,580	44,208
Remeasurement of plan assets		(9,529)	(600)
Contributions to plan assets		417,486	307,367
Benefits paid		(230,938)	(213,246)
Others		(6,270)	4,839
Fair value of plan assets at the end of period	₩	<u>2,620,046</u>	<u>2,397,717</u>

The Company expects to make an estimated contribution of ₩267,486 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:

<i>(in millions of Won)</i>		2021	2020
Equity instruments	₩	23,980	17,886
Debt instruments		811,498	696,583
Deposits		1,724,245	1,614,796
Others		60,323	68,452
	₩	<u>2,620,046</u>	<u>2,397,717</u>

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

<i>(in millions of Won)</i>		2021	2020
Current service costs	₩	243,029	245,047
Net interest costs(*1)		538	3,277
	₩	<u>243,567</u>	<u>248,324</u>

(*1) The actual return on plan assets amounted to ₩42,051 million and ₩43,608 million for the years ended December 31, 2021 and 2020, respectively.

The above expenses by function were as follows:

<i>(in millions of Won)</i>		2021	2020
Cost of sales	₩	166,734	177,223
Selling and administrative expenses		76,265	69,256
Others		568	1,845
	₩	<u>243,567</u>	<u>248,324</u>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

- 6) Accumulated actuarial gains (losses), net of tax recognized in other comprehensive income for the years ended December 31, 2021 and 2020 were as follows:

<i>(in millions of Won)</i>		2021	2020
Beginning	₩	(553,220)	(589,796)
Remeasurements of defined benefit plans		51,155	36,576
Ending	₩	<u>(502,065)</u>	<u>(553,220)</u>

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

<i>(%)</i>	2021	2020
Discount rate	1.25 ~ 7.84	0.53 ~ 13.00
Expected future increase in salaries(*1)	1.50 ~ 11.50	1.92 ~ 11.00

(*1) The expected future increase in salaries is based on the average salary increase rate for the past 5 years.

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

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

<i>(in millions of Won)</i>		1% Increase		1% Decrease	
		Amount	Percentage(%)	Amount	Percentage(%)
Discount rate	₩	(167,127)	(6.9)	192,542	8.0
Expected future increase in salaries		192,838	8.0	(170,207)	(7.0)

- 9) As of December 31, 2021 the maturity of the expected benefit payments are as follows:

<i>(in millions of Won)</i>		Within 1 year	1 year - 5 years	5 years - 10 years	10 years - 20 years	After 20 years	Total
Benefits to be paid	₩	280,973	847,689	610,187	1,105,470	457,677	3,301,996

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

22. Other Liabilities

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

(in millions of Won)

		2021	2020
Current			
Due to customers for contract work	₩	995,311	807,465
Advances received		475,800	416,960
Unearned revenue		106,574	24,433
Withholdings		340,107	332,327
Firm commitment liability		11,852	35,993
Others		14,844	8,304
	₩	<u>1,944,488</u>	<u>1,625,482</u>
Non-current			
Unearned revenue	₩	27,908	17,953
Others		28,583	19,067
	₩	<u>56,491</u>	<u>37,020</u>

23. 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)

	Book value	Level 1	Level 2	Level 3	Total
Financial assets					
Fair value through profit or loss					
Derivative assets	₩ 241,541	-	241,541	-	241,541
Short-term financial instruments	10,514,093	-	10,514,093	-	10,514,093
Debt securities	10,717	-	-	10,717	10,717
Other securities	430,998	37,343	1,022	392,633	430,998
Other receivables	2,000	-	-	2,000	2,000
Derivative hedging instruments(*2)	7,555	-	7,555	-	7,555
Fair value through other comprehensive income					
Equity securities	1,466,061	1,250,497	-	215,564	1,466,061
Financial assets measured at amortized cost(*1)					
Cash and cash equivalents	4,775,166	-	-	-	-
Trade accounts and notes receivable	9,051,708	-	-	-	-
Other receivables	2,761,566	-	-	-	-
Debt securities	151,146	-	-	-	-
Deposit instruments	2,745,280	-	-	-	-
	₩ <u>32,157,831</u>	<u>1,287,840</u>	<u>10,764,211</u>	<u>620,914</u>	<u>12,672,965</u>
Financial liabilities					
Fair value through profit or loss					
Derivative liabilities	₩ 93,236	-	93,236	-	93,236
Borrowings	1,435,193	1,435,193	-	-	1,435,193
Derivative hedging instruments(*2)	16,803	-	16,803	-	16,803
Financial liabilities measured at amortized cost(*1)					
Trade accounts and notes payable	5,468,869	-	-	-	-
Borrowings	20,306,023	-	20,393,246	-	20,393,246
Financial guarantee liabilities	25,598	-	-	-	-
Others	2,693,163	-	-	-	-
	₩ <u>30,038,885</u>	<u>1,435,193</u>	<u>20,503,285</u>	<u>-</u>	<u>21,938,478</u>

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

(*2) The Company applies hedge accounting which uses forward contracts as hedging instrument in order to hedge the risk of changes in fair value of product prices regarding firm commitments or purchase commitments. Also, the Company

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

applies cash flow hedge accounting which uses currency swap as hedging instrument in order to hedge the risk of interest rate and foreign exchange rate changes in foreign currency which influences cash flow from borrowings.

② December 31, 2020

(in millions of Won)

(in millions of Won)

		Book value	Fair value			
			Level 1	Level 2	Level 3	Total
Financial assets						
Fair value through profit or loss						
Derivative assets	₩	79,995	-	79,995	-	79,995
Short-term financial instruments		9,133,404	-	9,133,404	-	9,133,404
Debt securities		20,797	-	-	20,797	20,797
Other securities		364,404	47,321	2,242	314,841	364,404
Other receivables		2,000	-	-	2,000	2,000
Derivative hedging instruments		37,880	-	37,880	-	37,880
Fair value through other comprehensive income						
Equity securities		1,120,968	729,342	-	391,626	1,120,968
Debt securities		2,471	-	-	2,471	2,471
Financial assets measured at amortized cost(*1)						
Cash and Cash Equivalents		4,754,644	-	-	-	-
Trade accounts and notes receivable		7,332,890	-	-	-	-
Other receivables		2,300,515	-	-	-	-
Debt securities		151,146	-	-	-	-
Deposit instruments		2,359,951	-	-	-	-
	₩	27,661,065	776,663	9,253,521	731,735	10,761,919
Financial liabilities						
Fair value through profit or loss						
Derivative liabilities	₩	180,773	-	180,773	-	180,773
Derivative hedging instruments		31,591	-	31,591	-	31,591
Financial liabilities measured at amortized cost(*1)						
Trade accounts and notes payable		3,777,836	-	-	-	-
Borrowings		20,497,607	-	20,821,353	-	20,821,353
Financial guarantee liabilities		62,629	-	-	-	-
Others		2,347,244	-	-	-	-
	₩	26,897,680	-	21,033,717	-	21,033,717

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

- Financial assets and financial liabilities classified as fair value hierarchy Level 2
Fair values of derivatives are measured using the derivatives instrument valuation models such as market approach method and discounted cash flow method. Inputs of the financial instrument valuation model include forward rate, interest rate and others. The fair value of derivatives may change depending on the type of derivatives and the nature of the underlying assets.
- Financial assets and financial liabilities classified as fair value hierarchy Level 3

- 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	₩ 65,910	Discounted cash flows	Growth rate	0% ~ 1%	As growth rate increases, fair value increases
			Discount rate	6.19% ~ 20.24%	As discount rate increases, fair value decreases
	56,162	Peer group multiples method	Price multiples	0.817	As price multiples increases, fair value increases
	498,842	Asset value approach	-	-	-

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

If other inputs remain constant as of December 31, 2021 and one of the significant but not observable input is changed, the effect on fair value measurement is as follows:

(in millions of Won)

	Input variable	Favorable changes	Unfavorable changes
Financial assets at fair value	Fluctuation 0.5% of growth rate ₩	229	190
	Fluctuation 0.5% of discount rate	4,790	4,371

- ③ 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	₩ 731,735	793,950
Acquisition	138,473	78,241
Gain (loss) on valuations of financial assets	5,292	(41,537)
Other comprehensive income (loss)	1,581	(44,469)
Disposal and others	(256,167)	(54,450)
Ending	₩ 620,914	731,735

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

- 4) 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

(in millions of Won)

(in millions of Won)		Finance income and costs						Other comprehensive income (loss)
		Interest income (expense)	Gain and loss on valuation	Gain and loss on foreign currency	Gain and loss on disposal	Others	Total	
Financial assets at fair value through profit or loss	₩	158,121	(12,093)	-	12,119	26,170	184,317	-
Derivative assets		-	213,724	-	370,547	-	584,271	-
Financial assets at fair value through other comprehensive income		-	-	-	-	48,281	48,281	214,888
Financial assets measured at amortized cost		134,122	-	651,435	(17,769)	(7,149)	760,639	-
Financial liabilities at fair value		-	54,057	33,069	-	(15,876)	71,250	-
Derivative liabilities		-	55,858	-	(465,174)	-	(409,316)	309
Financial liabilities measured at amortized cost		(439,826)	-	(846,202)	(16)	11,537	(1,274,507)	-
	₩	(147,583)	311,546	(161,698)	(100,293)	62,963	(35,065)	215,197

② For the year ended December 31, 2020

(in millions of Won)

(in millions of Won)		Finance income and costs						Other comprehensive income (loss)
		Interest income (expense)	Gain and loss on valuation	Gain and loss on foreign currency	Gain and loss on disposal	Others	Total	
Financial assets at fair value through profit or loss	₩	165,160	(15,883)	-	9,979	329	159,585	-
Derivative assets		-	56,273	-	318,820	-	375,093	-
Financial assets at fair value through other comprehensive income		-	-	-	-	38,019	38,019	(77,627)
Financial assets measured at amortized cost		207,014	-	(222,215)	(15,779)	(5,821)	(36,801)	-
Derivative liabilities		-	(170,155)	-	(376,823)	-	(546,978)	(331)
Financial liabilities measured at amortized cost		(638,797)	-	450,984	-	(16,010)	(203,823)	-
	₩	(266,623)	(129,765)	228,769	(63,803)	16,517	(214,905)	(77,958)

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 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:

<i>(in millions of Won)</i>		2021	2020
Cash and cash equivalents	₩	4,775,166	4,754,644
Derivative assets		249,096	117,875
Short-term financial instrument		10,514,093	9,133,404
Debt securities		161,863	174,414
Other securities		430,998	364,404
Other receivables		2,763,566	2,302,515
Trade accounts and notes receivable		9,051,708	7,332,890
Deposit instruments		2,745,280	2,359,951
	₩	<u>30,691,770</u>	<u>26,540,097</u>

The Company provided financial guarantee for the repayment of loans of associates, joint ventures and third parties. As of December 31, 2021 and 2020, the maximum exposure to credit risk related to the financial guarantee amounted to ₩4,122,774 million and ₩4,069,562 million, respectively.

2) Impairment losses on financial assets and contract assets

The Company assesses expected credit losses by estimating the default rate based on the credit loss experience of prior periods and overdue conditions and considers the credit default swap (CDS) premium to reflect changes in credit risk by sector. For credit-impaired assets and significant receivables where there was a significant increase in credit risk, credit losses are individually assessed.

① Allowance for doubtful accounts as of December 31, 2021 and 2020 are as follows:

<i>(in millions of Won)</i>		2021	2020
Trade accounts and notes receivable	₩	365,120	386,650
Other accounts receivable		171,273	177,037
Loans		172,162	184,610
Others		8,810	5,396
	₩	<u>717,365</u>	<u>753,693</u>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

<i>(in millions of Won)</i>		2021	2020
Bad debt expenses	₩	40,153	829
Other bad debt expenses(*1)		19,704	71,092
Less: Recovery of allowance for other bad debt accounts		(32,679)	(17,987)
	₩	<u>27,178</u>	<u>53,934</u>

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

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

<i>(in millions of Won)</i>	2021		2020	
	Trade accounts and notes receivable	Allowance for doubtful accounts	Trade accounts and notes receivable	Allowance for doubtful accounts
Not due	₩ 9,564,773	28,866	7,052,689	82,836
Over due less than 1 month	289,716	6,537	279,548	4,238
1 month - 3 months	132,509	2,821	198,807	4,775
3 months - 12 months	85,339	22,212	286,274	21,042
Over 12 months	417,970	304,684	776,375	273,759
	₩ <u>10,490,307</u>	<u>365,120</u>	<u>8,593,693</u>	<u>386,650</u>

- ④ The aging and allowance for doubtful accounts of other receivables as of December 31, 2021 and 2020 are as follows:

<i>(in millions of Won)</i>	2021		2020	
	Loans and other account receivable	Allowance for doubtful accounts	Loans and other account receivable	Allowance for doubtful accounts
Not due	₩ 2,239,492	99,661	1,836,372	132,209
Over due less than 1 month	33,276	373	50,858	199
1 month - 3 months	86,517	71	39,053	100
3 months - 12 months	289,810	12,227	47,978	10,033
Over 12 months	466,716	239,913	695,297	224,502
	₩ <u>3,115,811</u>	<u>352,245</u>	<u>2,669,558</u>	<u>367,043</u>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

<i>(in millions of Won)</i>		2021	2020
Beginning	₩	753,693	898,274
Bad debt expenses		40,153	829
Other bad debt expenses (reversal)		(12,975)	53,105
Others(*1)		(63,506)	(198,515)
Ending	₩	<u>717,365</u>	<u>753,693</u>

(*1) Others for the year ended December 31, 2021 and 2020 included decreases mainly due to write-off amounting to ₩86,111 million and ₩150,417 million, respectively.

(c) Liquidity risk

- 1) Contractual maturities for non-derivative financial liabilities are as follows:

<i>(in millions of Won)</i>		Book value	Contractual cash flow	Within 1 year	1 year - 5 years	After 5 years
Trade accounts and notes payable	₩	5,468,869	5,469,700	5,469,006	694	-
Borrowings		21,741,216	22,109,986	8,711,485	12,479,283	919,218
Financial guarantee liabilities(*1)		25,598	4,122,774	4,122,774	-	-
Lease liabilities		778,014	1,041,367	212,332	465,206	363,829
Other financial liabilities		1,915,149	1,915,668	1,832,601	83,067	-
	₩	<u>29,928,846</u>	<u>34,659,495</u>	<u>20,348,198</u>	<u>13,028,250</u>	<u>1,283,047</u>

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

- 2) Contractual maturities for derivative financial liabilities are as follows:

<i>(in millions of Won)</i>		Within 1 year	1 year - 5 years	After 5 years	Total
Currency forward	₩	80,276	14,511	-	94,787
Currency swap		5,746	3,789	-	9,535
Interest swap		4,974	-	-	4,974
Others		744	-	-	744
	₩	<u>91,740</u>	<u>18,300</u>	<u>-</u>	<u>110,040</u>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(d) Currency risk

- 1) The Company has exposure to the risk that the fair value or future cash flows of a financial instrument will fluctuate because of the changes in foreign exchange rates. The exposure to currency risk as of December 31, 2021 and 2020 are as follows:

<i>(in millions of Won)</i>		2021		2020	
		Assets	Liabilities	Assets	Liabilities
USD	₩	5,237,890	7,879,302	4,331,058	6,768,169
EUR		622,749	2,620,254	459,423	939,160
JPY		156,007	545,622	110,569	644,675
Others		849,744	467,053	714,324	461,162

- 2) 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:

<i>(in millions of Won)</i>		2021		2020	
		10% increase	10% decrease	10% increase	10% decrease
USD	₩	(264,141)	264,141	(243,711)	243,711
EUR		(199,751)	199,751	(47,974)	47,974
JPY		(38,962)	38,962	(53,411)	53,411

(e) Interest rate risk

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

<i>(in millions of Won)</i>		2021	2020
Fixed rate			
Financial assets	₩	20,677,076	17,291,726
Financial liabilities		(16,092,096)	(14,601,638)
		<u>4,584,980</u>	<u>2,690,088</u>
Variable rate			
Financial liabilities	₩	(6,427,133)	(6,635,644)

- 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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

1%, the changes in interest expense for the years ended December 31, 2021 and 2020 were as follows:

<i>(in millions of Won)</i>		2021		2020	
		1% increase	1% decrease	1% increase	1% decrease
Variable rate financial instruments	₩	(64,271)	64,271	(66,356)	66,356

24. Share Capital and Capital Surplus

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

<i>(Share, in Won)</i>		2021	2020
Authorized shares		200,000,000	200,000,000
Par value	₩	5,000	5,000
Issued shares(*1)		87,186,835	87,186,835
Shared capital(*2)	₩	482,403,125,000	482,403,125,000

(*1) As of December 31, 2021, total number of ADRs of 26,067,848 outstanding in overseas stock market 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 aggregate par value of issued common stock is ₩46,469 million due to retirement of 9,293,790 treasury stocks.

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

<i>(share)</i>	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
Acquisition of treasury shares	-	(389,900)	(389,900)	-	(4,100,169)	(4,100,169)
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:

<i>(in millions of Won)</i>		2021	2020
Share premium	₩	463,825	463,825
Gain on disposal of treasury shares		796,623	796,623
Other capital surplus		127,512	50,099
	₩	1,387,960	1,310,547

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

25. Hybrid Bonds

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

<i>(in millions of Won)</i>	Date of issue	Date of maturity	Interest rate (%)	2021	2020
Hybrid bond 1-2(*1)	2013-06-13	2043-06-13	4.60	200,000	200,000
Issuance cost				(616)	(616)
				<u>₩ 199,384</u>	<u>199,384</u>

(*1) Details of issuance 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	Issue 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 holder's preference in the event of liquidation is senior to the common stockholders, but subordinate to other creditors. The interest accumulated but not paid on the hybrid bonds as of December 31, 2021 amounts to ₩479 million.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

- (b) POSCO ENERGY CO., LTD., a subsidiary of the Company, issued hybrid bonds, which are classified as non-controlling interests in the consolidated financial statements. Hybrid bonds as of December 31, 2021 and 2020 are as follows:

<i>(in millions of Won)</i>	<u>Date of issue</u>	<u>Date of maturity</u>	<u>Interest rate (%)</u>	<u>2021</u>	<u>2020</u>
Hybrid bond 1-4(*1)	2013-08-29	2043-08-29	5.21	140,000	140,000
Issuance cost				(429)	(429)
				<u>₩ 139,571</u>	<u>139,571</u>

- (*1) Details of hybrid bonds of POSCO ENERGY CO., LTD. as of December 31, 2021 are as follows:

	<u>Hybrid bond 1-4</u>
Maturity date	30 years (The issuer has a right to extend the maturity date)
Interest rate	Issue date ~ 2023-08-29 : 5.21% Reset every 10 years as follows; · After 10 years : return on government bond (10 years) + 1.55% · After 10 years : additionally +0.25% according to Step-up clauses · After 30 years : additionally +0.75%
Interest payments condition	Quarterly (Optional deferral of interest payment is available to the Company)
Others	The issuer can call the hybrid bond at year 10th anniversary of issuance and interest payment date afterwards

The hybrid bond holder's preference in the event of liquidation is senior to the common stockholders, but subordinate to other creditors. The interest accumulated but not paid on the hybrid bonds as of December 31, 2021 amounts to ₩639 million.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

26. Reserves

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

<i>(in millions of Won)</i>		2021	2020
Accumulated comprehensive loss of investments in associates and joint ventures	₩	(532,833)	(693,176)
Changes in fair value of equity investments at fair value through other comprehensive income		(153,359)	(359,283)
Foreign currency translation differences		7,762	(339,707)
Gains or losses on valuation of derivatives		(455)	(699)
Others		11,900	11,947
	₩	<u>(666,985)</u>	<u>(1,380,918)</u>

(b) Changes in fair value of equity investments at fair value through other comprehensive income for the years ended December 31, 2021 and 2020 were as follows:

<i>(in millions of Won)</i>		2021	2020
Beginning balance	₩	(359,283)	(285,073)
Changes in unrealized fair value of equity investments		201,144	(72,808)
Reclassification upon disposal		1,667	2,726
Others		3,113	(4,128)
Ending balance	₩	<u>(153,359)</u>	<u>(359,283)</u>

27. Treasury Shares

Based on the Board of Directors' resolution, POSCO holds treasury shares for business purposes including price stabilization. The changes in treasury shares for the years ended December 31, 2021 and 2020 were as follows:

<i>(shares, in millions of Won)</i>	2021		2020	
	Number of shares	Amount	Number of shares	Amount
Beginning	11,171,363	₩ 2,391,523	7,071,194	₩ 1,508,303
Acquisition of treasury shares	389,900	116,771	4,100,169	883,219
Ending	<u>11,561,263</u>	<u>₩ 2,508,294</u>	<u>11,171,363</u>	<u>₩ 2,391,522</u>

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.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

28. Revenue

(a) Disaggregation of revenue

- 1) Details of revenue disaggregated by types of revenue and timing of revenue recognition for the years ended December 31, 2021 and 2020 were as follows:

① For the year ended December 31, 2021

(in millions of Won)

	Steel	Trading	Construction	Others	Total
Types of revenue					
Revenue from sales of goods	₩ 40,305,393	24,233,531	-	1,438,050	65,976,974
Revenue from services	680,513	547,369	58,807	2,133,164	3,419,853
Revenue from construction contract	-	-	6,337,194	27,967	6,365,161
Others	107,499	284,708	2,365	175,785	570,357
	₩ 41,093,405	25,065,608	6,398,366	3,774,966	76,332,345
Timing of revenue recognition					
Revenue recognized at a point in time	₩ 40,412,892	24,518,239	134,588	1,613,835	66,679,554
Revenue recognized over time	680,513	547,369	6,263,778	2,161,131	9,652,791
	₩ 41,093,405	25,065,608	6,398,366	3,774,966	76,332,345

② For the year ended December 31, 2020

(in millions of Won)

	Steel	Trading	Construction	Others	Total
Types of revenue					
Revenue from sales of goods	₩ 28,394,790	18,796,522	-	917,307	48,108,619
Revenue from services	462,489	388,222	45,359	1,811,380	2,707,450
Revenue from construction contract	-	-	6,523,615	27,949	6,551,564
Others	35,599	160,478	7,196	221,890	425,163
	₩ 28,892,878	19,345,222	6,576,170	2,978,526	57,792,796
Timing of revenue recognition					
Revenue recognized at a point in time	₩ 28,430,389	18,957,000	141,916	1,139,197	48,668,502
Revenue recognized over time	462,489	388,222	6,434,254	1,839,329	9,124,294
	₩ 28,892,878	19,345,222	6,576,170	2,978,526	57,792,796

- (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	₩ 9,051,708	7,332,890
Contract assets		
Due from customers for contract work	1,073,479	874,152
Contract liabilities		
Advance received	483,375	418,777
Due to customers for contract work	995,311	807,465
Unearned revenue	133,765	42,040

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

29. Revenue – Contract Balances

(a) Details of outstanding contracts as of December 31, 2021 and 2020 are as follows:

(in millions of Won)

		2021		2020	
		Construction segment	Others	Construction segment	Others
Accumulated cost	₩	32,687,274	81,478	30,780,560	247,737
Accumulated contract profit		3,302,005	14,932	3,034,148	49,692
Accumulated contract loss		(1,227,883)	(16,904)	(1,260,451)	(2,482)
Accumulated contract revenue		34,761,396	79,506	32,554,257	294,947

(b) Details of due from customers for contract work and due to customers for contract work as of December 31, 2021 and 2020 are as follows:

(in millions of Won)

		2021		2020	
		Construction segment	Others	Construction segment	Others
Due from customers for contract	₩	1,069,343	40,739	915,285	33,594
Due to customers for contract work		(937,337)	(57,974)	(765,818)	(41,647)
	₩	132,006	(17,235)	149,467	(8,053)

(c) Details of the provisions of construction loss as of December 31, 2021 and 2020 are as follows:

(in millions of Won)

		2021	2020
Construction segment	₩	26,656	70,818
Others		16,229	437
	₩	42,885	71,255

(d) Due to the factors causing the variation of costs during the year ended December 31, 2021, the estimated total contract costs have changed. Details of changes in estimated total contract costs and the impact on profit before income taxes for the year ended December 31, 2021 and future periods are as follows:

(in millions of Won)

		Changes in total contract revenues	Changes in estimated total contract costs	Changes in profit (loss) of contract		
				Net income	Future income (loss)	Total
Construction segment	₩	844,783	603,225	135,016	106,542	241,558
Others		37,258	34,646	8,495	(5,883)	2,612
	₩	882,041	637,871	143,511	100,659	244,170

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(e) As of December 31, 2021, revenue expected to be recognized in the future in relation to performance obligations that have not been fulfilled (or partially fulfilled) is as follows:

<i>(in millions of Won)</i>		2022	2023	2024	After 2025	Total
Construction segment	₩	6,802,458	5,822,364	4,192,938	1,667,862	18,485,622
Others		98,750	80,401	18,913	55,581	253,645
	₩	<u>6,901,208</u>	<u>5,902,765</u>	<u>4,211,851</u>	<u>1,723,443</u>	<u>18,739,267</u>

(f) Uncertainty of estimates

1) Total contract revenues

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

2) Total contract costs

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

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

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

30. Selling and Administrative Expenses

(a) Other administrative expenses

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

<i>(in millions of Won)</i>		2021	2020
Wages and salaries	₩	941,824	828,667
Expenses related to post-employment benefits		142,606	83,037
Other employee benefits		207,074	187,075
Travel		18,916	17,513
Depreciation		144,037	146,483
Amortization		87,232	115,254
Communication		9,898	10,390
Electricity		7,398	7,968
Taxes and public dues		85,808	59,274
Rental		28,682	34,966
Repairs		12,604	8,952
Entertainment		10,186	8,328
Advertising		89,218	71,743
Research & development		123,092	116,273
Service fees		187,271	156,530
Vehicles maintenance		5,336	4,880
Industry association fee		9,691	9,586
Conference		14,479	11,576
Increase to provisions		8,936	12,285
Others		75,521	48,822
	₩	<u>2,209,809</u>	<u>1,939,602</u>

(b) Selling expenses

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

<i>(in millions of Won)</i>		2021	2020
Freight and custody expenses	₩	192,973	180,503
Operating expenses for distribution center		7,382	6,977
Sales commissions		65,404	86,851
Sales advertising		3,620	1,284
Sales promotion		6,264	7,086
Sample		2,164	1,650
Sales insurance premium		41,069	30,364
Contract cost		61,450	46,247
Others		12,749	15,978
	₩	<u>393,075</u>	<u>376,940</u>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

31. 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
Administrative expenses	₩	123,092	116,273
Cost of sales		345,457	351,861
	₩	<u>468,549</u>	<u>468,134</u>

32. Finance Income and Costs

Details of other 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)	₩	292,243	372,174
Dividend income		74,451	38,348
Gain on foreign currency transactions		1,079,939	1,147,692
Gain on foreign currency translations		298,452	574,463
Gain on derivatives transactions		402,171	352,005
Gain on valuations of derivatives		370,780	115,642
Gain on disposals of financial assets at fair value through profit of loss		20,070	15,550
Gain on valuations of financial assets at fair value through profit or loss		101,717	51,581
Gain on valuations of financial liabilities at fair value through profit or loss		54,057	-
Others		36,230	10,044
	₩	<u>2,730,110</u>	<u>2,677,499</u>
Finance costs			
Interest expenses	₩	439,826	638,797
Loss on foreign currency transactions		985,179	1,067,907
Loss on foreign currency translations		554,910	425,479
Loss on derivatives transactions		496,798	410,008
Loss on valuation of derivatives		101,198	229,524
Loss on disposal of trade accounts and notes receivable		17,769	15,816
Loss on disposals of financial assets at fair value through profit or loss		7,951	5,571
Loss on valuations of financial assets at fair value through profit or loss		113,810	67,464
Others		47,734	31,836
	₩	<u>2,765,175</u>	<u>2,892,402</u>

(*1) Interest income calculated using the effective interest method for the years ended December 31, 2021 and 2020 were ₩134,121 million and ₩207,014 million, respectively.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

33. 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 assets held for sale	₩ 60,208	841
Gain on disposals of investment		
in subsidiaries, associates and joint ventures	85,981	88,836
Gain on disposals of property, plant and equipment	12,016	15,548
Gain on disposals of intangible assets	273	815
Gain on valuation of firm commitment	169,485	107,511
Gain on disposals of emission rights	567	24,851
Reversal of other provisions	33,887	5,154
Premium income	38,115	25,253
Others(*1)	177,465	133,527
	₩ <u>577,997</u>	<u>402,336</u>
Other non-operating expenses		
Impairment loss on assets held for sale	₩ -	5,030
Loss on disposals of investments		
in subsidiaries, associates and joint ventures	12,882	14,632
Loss on disposals of property, plant and equipment	95,720	142,126
Impairment loss on property, plant and equipment	311,520	27,040
Impairment loss on intangible assets	224,328	197,776
Loss on valuation of firm commitment	111,542	93,098
Idle tangible asset expenses	23,843	19,276
Increase to provisions	37,962	30,536
Donations	101,258	45,652
Others	108,437	70,408
	₩ <u>1,027,492</u>	<u>645,574</u>

(*1) During the year ended December 31, 2021, the Company recognized ₩46,283 million of non-operating income for refund of taxes other than income tax as a result of administrative litigation for tax audits.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

34. Expenses by Nature

Expenses that are recorded by nature as cost of sales, selling and administrative expenses, impairment loss on other receivables 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 expense):

<i>(in millions of Won)</i>	2021	2020
Raw material used, changes in inventories and others ₩	44,763,646	34,829,420
Employee benefits expenses(*2)	4,023,167	3,624,953
Outsourced processing cost	7,690,334	7,808,343
Electricity and water expenses	744,207	656,121
Depreciation(*1)	3,135,346	3,156,181
Amortization	444,100	465,558
Freight and custody expenses	1,580,200	1,428,012
Sales commissions	65,404	86,851
Loss on disposal of property, plant and equipment	95,720	142,126
Impairment loss on property, plant and equipment	311,520	27,040
Impairment loss on intangible assets	224,328	197,776
Donations	101,258	45,652
Other expenses	4,962,223	3,638,393
	₩ 68,141,453	56,106,426

(*1) Includes depreciation expense of investment property.

(*2) The details of employee benefits expenses for the years ended December 31, 2021 and 2020 were as follows:

<i>(in millions of Won)</i>	2021	2020
Wages and salaries ₩	3,684,894	3,316,364
Expenses related to post-employment benefits	338,273	308,589
	₩ 4,023,167	3,624,953

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

35. Income Taxes

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

<i>(in millions of Won)</i>		2021	2020
Current income taxes(*1)	₩	2,470,416	692,869
Deferred income tax due to temporary differences		(147,562)	(468,640)
Items credited directly to equity		(102,671)	12,705
Income tax expense	₩	<u>2,220,183</u>	<u>236,934</u>

(*1) Refund (additional payment) of income taxes when filing a final corporation tax return is 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:

<i>(in millions of Won)</i>		2021	2020
Net changes in fair value of equity investments			
at fair value through other comprehensive income(*1)	₩	(83,532)	26,850
Remeasurements of defined benefit plans(*1)		(17,685)	(13,327)
Others		(1,454)	(818)
	₩	<u>(102,671)</u>	<u>12,705</u>

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(c) The following table reconciles the calculated income tax expense based on POSCO's statutory rate (27.5%) to the actual amount of taxes recorded by the Company for the years ended December 31, 2021 and 2020.

<i>(in millions of Won)</i>		2021	2020
Profit before income tax expense	₩	9,416,073	2,025,086
Income tax expense computed at statutory rate		2,579,058	546,537
Adjustments:			
Tax credit		(313,205)	(90,093)
Refund of taxes for prior years		(42,667)	(14,362)
Tax effect from tax audit		5,635	11,796
Investment in subsidiaries, associates and joint ventures		(111,938)	147,874
Tax effect due to permanent differences		17,811	2,591
Others(*1)		85,489	(367,409)
		<u>(358,875)</u>	<u>(309,603)</u>
Income tax expense	₩	<u>2,220,183</u>	<u>236,934</u>
Effective tax rate (%)		23.58%	11.7%

(*1) Due to changes in estimation on deductibility of temporary difference related to Synthetic Natural Gas (SNG) facility and business combination of Off-gas Power Station Business Sector, ₩328,453 million of income tax benefit is recognized for the year ended December 31, 2020.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(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		
	Beginning	Increase (decrease)	Ending	Beginning	Increase (decrease)	Ending
Deferred income tax due to temporary differences						
Allowance for doubtful account	₩ 147,224	(3,866)	143,358	153,136	(5,912)	147,224
PPE - Depreciation	32,236	(1,328)	30,908	22,211	10,025	32,236
Share of profit or loss of equity-accounted investees	219,431	5,135	224,566	119,114	100,317	219,431
Allowance for inventories valuation	11,542	11,441	22,983	9,445	2,097	11,542
PP&E - Revaluation	(1,733,999)	130,616	(1,603,383)	(1,818,461)	84,462	(1,733,999)
Prepaid expenses	19,831	(301)	19,530	15,212	4,619	19,831
PP&E - Impairment loss	383,503	70,166	453,669	137,326	246,177	383,503
Gain or loss on foreign currency translation	(51,645)	50,540	(1,105)	7,036	(58,681)	(51,645)
Defined benefit liabilities	(121,820)	(26,521)	(148,341)	(95,683)	(26,137)	(121,820)
Provision for construction losses	17,605	(7,415)	10,190	7,303	10,302	17,605
Provision for construction warranty	63,515	10,845	74,360	61,801	1,714	63,515
Accrued income	(41,176)	(9,276)	(50,452)	(30,816)	(10,360)	(41,176)
Others	545,042	(85,423)	459,619	432,799	112,243	545,042
	(508,711)	144,613	(364,098)	(979,577)	470,866	(508,712)
Deferred income taxes recognized directly to equity						
Net changes in fair value of equity investments						
at fair value through other comprehensive income	156,991	(83,532)	73,459	130,141	26,850	156,991
Others	153,876	(19,139)	134,737	168,021	(14,145)	153,876
	310,867	(102,671)	208,196	298,162	12,705	310,867
Deferred tax from tax credit						
Tax credit carry-forward and others	72,406	458	72,864	91,839	(19,433)	72,406
Investments in subsidiaries, associates and joint ventures						
Investments in subsidiaries, associates and joint ventures	139,867	105,162	245,029	135,364	4,503	139,867
	₩ 14,429	147,562	161,991	(454,212)	468,641	14,428

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(e) Deferred tax assets and liabilities for the years ended December 31, 2021 and 2020 are as follows:

(in millions of Won)

	2021			2020		
	Asset	Liabilities	Net	Asset	Liabilities	Net
Deferred income tax due to temporary differences						
Allowance for doubtful account	₩ 143,526	(168)	143,358	147,243	(19)	147,224
PPE - Depreciation	97,713	(66,805)	30,908	84,890	(52,654)	32,236
Share of profit or loss of equity-accounted investees	294,505	(69,939)	224,566	281,049	(61,618)	219,431
Allowance for inventories valuation	22,983	-	22,983	11,542	-	11,542
PP&E - Revaluation	-	(1,603,383)	(1,603,383)	-	(1,733,999)	(1,733,999)
Prepaid expenses	19,604	(74)	19,530	19,859	(28)	19,831
PP&E - Impairment loss	453,669	-	453,669	383,503	-	383,503
Gain or loss on foreign currency translation	87,947	(89,052)	(1,105)	101,244	(152,889)	(51,645)
Defined benefit liabilities	459,074	(607,415)	(148,341)	478,144	(599,964)	(121,820)
Provision for construction losses	10,190	-	10,190	17,605	-	17,605
Provision for construction warranty	74,360	-	74,360	63,515	-	63,515
Accrued income	-	(50,452)	(50,452)	-	(41,176)	(41,176)
Others	699,099	(239,480)	459,619	726,516	(181,474)	545,042
	<u>2,362,670</u>	<u>(2,726,768)</u>	<u>(364,098)</u>	<u>2,315,110</u>	<u>(2,823,821)</u>	<u>(508,711)</u>
Deferred income taxes recognized directly to equity						
Net changes in fair value of equity investments at fair value through other comprehensive income	143,956	(70,497)	73,459	167,070	(10,079)	156,991
Others	159,793	(25,056)	134,737	177,938	(24,062)	153,876
	<u>303,749</u>	<u>(95,553)</u>	<u>208,196</u>	<u>345,008</u>	<u>(34,141)</u>	<u>310,867</u>
Deferred tax from tax credit						
Tax credit carry-forward and others	72,864	-	72,864	72,406	-	72,406
Investments in subsidiaries, associates and joint ventures						
Investments in subsidiaries, associates and joint ventures	513,884	(268,855)	245,029	422,338	(282,471)	139,867
	<u>₩ 3,253,167</u>	<u>(3,091,176)</u>	<u>161,991</u>	<u>3,154,862</u>	<u>(3,140,433)</u>	<u>14,429</u>

(f) As of December 31, 2021, deductible temporary differences of ₩6,346,230 million and taxable temporary differences of ₩8,365,483 million related to investments in subsidiaries and associates were not recognized as deferred tax assets or liabilities, because it is not probable they will reverse in the foreseeable future.

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

36. Earnings Per Share

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

<i>(in Won except per share information)</i>	2021	2020
Profit attributable to controlling interest	₩ 6,617,238,627,273	1,602,147,657,531
Interests of hybrid bonds, net of tax	(6,669,999,999)	(6,688,273,972)
Weighted-average number of common shares outstanding(*1)	75,696,150	79,120,963
Basic earnings per share	₩ <u>87,330</u>	<u>20,165</u>

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

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

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

<i>(in Won, except share information)</i>	2021	2020
Profit attributable to controlling interest	₩ 6,617,238,627,273	1,602,147,657,531
Interests of hybrid bonds, net of tax	(6,669,999,999)	(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	₩ <u>85,377</u>	<u>20,165</u>

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

<i>(shares)</i>	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	₩ <u>76,688,340</u>	<u>79,120,963</u>

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.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

37. Related Party Transactions

(a) Significant transactions between the controlling company and 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 others(*1)		Purchase and others(*2)			
	Sales	Others	Purchase of material	Purchase of fixed assets	Outsourced processing cost	Others
Subsidiaries(*3)						
POSCO ENGINEERING & CONSTRUCTION CO.,LTD.	₩ 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.	5,207	1,450	11,271	-	-	26,137
POSCO MOBILITY SOLUTION (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	-	-	49,848
₩	17,680,333	652,846	7,492,259	960,353	706,703	491,195

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

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

(*3) As of December 31, 2021, the company provided guarantees to related parties (Note 38)

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

2) For the year ended December 31, 2020

(in millions of Won)

	Sales and others		Purchase and others			
	Sales	Others	Purchase of material	Purchase of fixed assets	Outsourced processing cost	Others
Subsidiaries						
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	₩ 6,790	11,123	15	772,846	220	63,467
POSCO COATED & COLOR STEEL Co., Ltd.	418,619	1,820	-	-	28,523	639
POSCO ICT	2,747	4,996	-	374,914	41,384	181,554
eNtoB Corporation	15	60	214,750	34,217	76	25,870
POSCO CHEMICAL CO., LTD	258,154	34,944	456,780	23,003	304,135	4,816
POSCO ENERGY CO., LTD.	1,262	2,396	14,011	3	-	23,336
POSCO MOBILITY SOLUTION (formerly, POSCO SPS CORPORATION)	381,591	-	-	-	32,325	1,500
POSCO INTERNATIONAL Corporation	5,644,017	56,322	342,520	-	11,371	4,375
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	3,915
Qingdao Pohang Stainless Steel Co., Ltd.	145,006	66	-	-	-	305
POSCO JAPAN Co., Ltd.	1,076,987	-	37,210	5,277	-	6,225
POSCO-VIETNAM CO., Ltd.	253,060	605	-	-	-	96
POSCO MEXICO S.A. DE C.V.	168,188	403	-	-	-	2,000
POSCO Maharashtra Steel Private Limited	328,943	2,507	-	-	-	479
POSCO(Suzhou) Automotive Processing Center Co., Ltd.	112,925	-	-	-	-	-
POSCO VST CO., LTD.	208,464	218	-	-	-	156
POSCO INTERNATIONAL SINGAPORE PTE LTD.	-	-	600,580	-	-	-
POSCO ASSAN TST STEEL INDUSTRY	264,786	948	2,314	-	-	18
Others	806,672	22,069	71,261	45,695	238,496	135,429
	<u>11,904,304</u>	<u>140,999</u>	<u>2,055,737</u>	<u>1,260,286</u>	<u>658,038</u>	<u>454,180</u>
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	44,068
	<u>80,783</u>	<u>165,078</u>	<u>1,910,158</u>	<u>84,839</u>	<u>4,086</u>	<u>44,068</u>
₩	<u>11,985,087</u>	<u>306,077</u>	<u>3,965,895</u>	<u>1,345,125</u>	<u>662,124</u>	<u>498,248</u>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

(b) The related account balances of significant transactions between the controlling company and 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
Subsidiaries						
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	₩ 5,692	10	5,702	-	97,007	507
POSCO COATED & COLOR STEEL Co., Ltd.	95,001	-	95,001	-	154	5,082
POSCO ICT	221	3	224	3,736	155,064	27,562
eNtoB Corporation	-	-	-	1,683	23,851	-
POSCO CHEMICAL CO., LTD.	35,895	3,664	39,559	12,969	57,498	17,990
POSCO ENERGY CO., LTD.	1,485	292	1,777	-	6,169	10,066
POSCO MOBILITY SOLUTION (formerly, POSCO SPS CORPORATION)	133,608	-	133,608	71	2,232	5,104
POSCO INTERNATIONAL Corporation	1,279,463	4	1,279,467	4,831	483	502
POSCO Thainox Public Company Limited	54,804	-	54,804	-	-	-
Qingdao Pohang Stainless Steel Co., Ltd.	35,423	-	35,423	-	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	-
POSCO ASSAN TST STEEL INDUSTRY	220,481	951	221,432	-	-	-
Others	368,252	21,761	390,013	22,583	48,274	84,778
	2,940,446	27,998	2,968,444	215,438	390,905	151,591
Associates and joint ventures						
SNNC	420	65	485	52,396	-	-
Roy Hill Holdings Pty Ltd	-	34,356	34,356	436,774	-	-
FQM Australia Holdings Pty Ltd(*1)	-	181,122	181,122	-	-	-
Others	168,167	15,895	184,062	5,549	187	-
	168,587	231,438	400,025	494,719	187	-
₩	3,109,033	259,436	3,368,469	710,157	391,092	151,591

(*1) It includes ₩177,825 million in acquisition of First Quantum Minerals Ltd. loans under the agreement for the purpose of investing in nickel mines in Australia during the year ended December 31, 2021.

2) December 31, 2020

(in millions of Won)

	Receivables			Payables		
	Trade accounts and notes receivable	Others	Total	Trade accounts and notes payable	Accounts payable	Others
Subsidiaries						
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	6,010	11	6,021	-	81,608	394
POSCO COATED & COLOR STEEL Co., Ltd.	63,520	-	63,520	-	180	3,709
POSCO ICT	245	1	246	2,820	118,720	31,411
eNtoB Corporation	-	-	-	1,361	35,846	18
POSCO CHEMICAL CO., LTD.	19,406	3,434	22,840	13,066	55,515	18,531
POSCO ENERGY CO., LTD.	261	122	383	-	2,995	12,508
POSCO MOBILITY SOLUTION (formerly, POSCO SPS CORPORATION)	72,009	-	72,009	-	2,352	4,175
POSCO INTERNATIONAL Corporation	534,531	-	534,531	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	-	-
POSCO ASSAN TST STEEL INDUSTRY	258,563	1,845	260,408	-	-	-
Others	467,135	29,002	496,137	2,926	30,691	82,716
	1,732,030	36,831	1,768,861	65,482	327,907	153,462
Associates and joint ventures						
SNNC	106	228	334	33,380	-	-
Roy Hill Holdings Pty Ltd	-	52,076	52,076	201,924	-	-
Others	818	17,882	18,700	6,704	-	-
	924	70,186	71,110	242,008	-	-
	1,732,954	107,017	1,839,971	307,490	327,907	153,462

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(c) Significant transactions between the Company, excluding the controlling company, and 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 others		Purchase and others	
	Sales	Others	Purchase of material	Others
Associates and joint ventures				
New Songdo International City Development, LLC	₩ 286,731	266	-	165
SNNC	75,129	743	19,720	40,090
Noeul Green Energy Co., Ltd.	6,127	-	-	1,896
CSP - Companhia Siderurgica do Pecem	4,660	-	96,179	-
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	46,323	-	33,316	5,686
POS-SEAHSTEELWIRE(TIANJIN)CO.,Ltd	14,673	-	-	-
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	39,887	-	164	-
DMSA/AMSA	-	-	9,875	-
South-East Asia Gas Pipeline Company Ltd.	-	35,392	-	-
POSCO MITSUBISHI CARBON TECHNOLOGY	65,746	10	4,347	180
Samcheok Blue Power Co., Ltd.	263,730	405	-	4
TK CHEMICAL CORPORATION	14,906	-	2,292	-
Pocheon-Hwado Highway Corp. (formerly, Metropolitan Outer Ring Expressway Co., Ltd)	62,829	-	-	-
UITrans LRT Co., Ltd.	10,736	-	-	-
Roy Hill Holdings Pty Ltd	-	104,903	-	-
Others	184,606	64,480	31,379	18,505
	₩ 1,076,083	206,199	197,272	66,526

2) For the year ended December 31, 2020

(in millions of Won)

	Sales and others		Purchase and others	
	Sales	Others	Purchase of material	Others
Associates and joint ventures				
POSCO PLANTEC Co., Ltd.	₩ 2,558	-	5	-
New Songdo International City Development, LLC	125,909	26,451	-	137
SNNC	61,332	30	48,764	126,060
Chuncheon Energy Co., Ltd.	213	211	-	-
Noeul Green Energy Co., Ltd.	6,059	-	-	829
CSP - Companhia Siderurgica do Pecem	47,243	11,432	165,269	14,399
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd	42,189	-	37,509	151
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	-	-	5,780	-
POS-SEAHSTEELWIRE(TIANJIN)CO.,Ltd	8,757	-	-	-
PT. Batutua Tembaga Raya	-	1,061	28,174	-
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	29,964	-	384	-
DMSA/AMSA	-	-	29,189	-
South-East Asia Gas Pipeline Company Ltd.	7	71,299	-	-
POSCO MITSUBISHI CARBON TECHNOLOGY	31,068	19,530	3,608	701
Samcheok Blue Power Co., Ltd.	220,372	-	-	-
TK CHEMICAL CORPORATION	104,749	-	26,863	-
Pocheon-Hwado Highway Corp. (formerly, Metropolitan Outer Ring Expressway Co., Ltd)	17,631	-	-	-
UITrans LRT Co., Ltd.	2,263	-	-	-
Roy Hill Holdings Pty Ltd	-	22,797	-	-
Others	162,257	49,158	49,315	37,582
	₩ 862,571	201,969	394,860	179,859

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

(d) The related account balances of significant transactions between the Company, excluding the controlling company, and related companies as of December 31, 2021 and 2020 are as follows:

1) December 31, 2021

(in millions of Won)

	Receivables(*1)				Payables		
	Trade accounts and notes receivable	Loans	Others	Total	Trade accounts and notes payable	Others	Total
Associates and joint ventures							
New Songdo International City Development, LLC	₩ 49,748	-	16,261	66,009	-	-	-
Chuncheon Energy Co., Ltd.	-	-	-	-	257	-	257
Samcheok Blue Power Co., Ltd.	120,672	-	-	120,672	-	23,683	23,683
Nickel Mining Company SAS	-	62,611	477	63,088	-	-	-
CSP - Companhia Siderurgica do Pecem	-	-	-	-	3,144	-	3,144
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd.	9,108	-	-	9,108	4,393	-	4,393
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	19,271	-	-	19,271	-	18	18
South-East Asia Gas Pipeline Company Ltd.	-	47,423	-	47,423	-	-	-
POSCO MITSUBISHI CARBON TECHNOLOGY	8,183	-	-	8,183	1,083	-	1,083
Pocheon-Hwado Highway Corp. (formerly, Metropolitan Outer Ring Expressway Co., Ltd.)	14,162	-	-	14,162	-	-	-
UITrans LRT Co., Ltd.	7,048	29,099	-	36,147	-	-	-
Others	38,962	179,036	114,775	332,773	240	31,047	31,287
	₩ 267,154	318,169	131,513	716,836	9,117	54,748	63,865

(*1) As of December 31, 2021, the Company recognizes bad-debt allowance for receivables amounting to ₩114,315 million.

2) December 31, 2020

(in millions of Won)

	Receivables(*1)				Payables		
	Trade accounts and notes receivable	Loans	Others	Total	Trade accounts and notes payable	Others	Total
Associates and joint ventures							
New Songdo International City Development, LLC	₩ 23,866	-	20,592	44,458	-	3	3
Chuncheon Energy Co., Ltd.	-	-	-	-	444	-	444
Samcheok Blue Power Co., Ltd.	92,715	-	-	92,715	-	40,536	40,536
Nickel Mining Company SAS	-	62,420	143	62,563	-	-	-
CSP - Companhia Siderurgica do Pecem	19,704	-	-	19,704	-	-	-
Zhongyue POSCO (Qinhuangdao) Tinplate Industrial Co., Ltd.	6,534	-	-	6,534	1,023	150	1,173
PT. Batutua Tembaga Raya	-	35,355	-	35,355	-	-	-
POSCO SeAH Steel Wire(Nantong) Co., Ltd.	13,889	-	-	13,889	193	-	193
South-East Asia Gas Pipeline Company Ltd.	-	91,003	-	91,003	-	-	-
POSCO MITSUBISHI CARBON TECHNOLOGY	2,799	-	-	2,799	783	-	783
TK CHEMICAL CORPORATION	21,916	-	-	21,916	429	-	429
Pocheon-Hwado Highway Corp. (formerly, Metropolitan Outer Ring Expressway Co., Ltd.)	6,299	-	-	6,299	-	-	-
UITrans LRT Co., Ltd.	6,908	23,452	102	30,462	-	-	-
Others	65,545	143,120	110,961	319,646	7,035	11,446	18,481
	₩ 260,175	355,350	131,818	747,343	9,907	52,135	62,042

(*1) As of December 31, 2020, the Company recognizes bad-debt allowance for receivables amounting to ₩133,997 million.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(e) Significant financial transactions between the Company, excluding the controlling company, and related companies for the years ended December 31, 2021 and 2020 were as follows:

1) December 31, 2021

(in millions of Won)

	Beginning	Lend	Collect	Others(*1)	Ending
Associates and joint ventures					
UITrans LRT Co., Ltd.	₩ 23,452	5,682	-	(35)	29,099
South-East Asia Gas Pipeline Company Ltd.	91,003	-	(49,928)	6,348	47,423
PT. Batutua Tembaga Raya(*2)	35,355	-	-	(35,355)	-
PT. Tanggamus Electric Power	4,304	-	-	386	4,690
PT. Wampu Electric Power	5,186	-	-	465	5,651
PT. POSMI Steel Indonesia	2,176	-	-	195	2,371
Nickel Mining Company SAS	62,420	-	-	191	62,611
KRAKATAU POS-CHEM DONG-SUH CHEMICAL	5,440	-	-	(698)	4,742
POS-SeaAH Steel Wire (Thailand) Co., Ltd.	6,528	-	-	585	7,113
AMCI (WA) PTY LTD	83,291	6,154	-	2,220	91,665
POS-AUSTEM YANTAI AUTOMOTIVE CO.,LTD	5,440	-	-	488	5,928
POS-AUSTEM WUHAN AUTOMOTIVE CO.,LTD	8,704	-	-	780	9,484
Hyo-chun Co., Ltd.	2,382	-	-	-	2,382
POS-AUSTEM Suzhou Automotive Co., Ltd	16,320	-	-	1,463	17,783
CAML RESOURCES PTY LTD	3,312	-	(3,312)	-	-
Shinahn Wind Power Generation(*3)	37	60	-	(97)	-
FQM Australia Holdings PTY LTD	-	27,242	-	(15)	27,227
	₩ 355,350	39,138	(53,240)	(23,079)	318,169

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

(*2) PT. Batutua Tembaga Raya was excluded from the association due to the sale of its shares during the years ended December 31, 2021. Meanwhile, the uncollected loan was offset and written off from the loan loss provisions set in the previous period, and these effects are included in Others.

(*3) Shinahn Wind Power Generation was excluded from the association due to the sale of its shares during the years period ended December 31, 2021.

2) December 31, 2020

(in millions of Won)

	Beginning	Lend	Collect	Others(*2)	Ending
Associates and jointventures					
UITrans LRT Co., Ltd.	₩ 10,579	12,873	-	-	23,452
DMSA/AMSA(*1)	57,999	-	-	(57,999)	-
South-East Asia Gas Pipeline Company Ltd.	147,367	-	(47,539)	(8,825)	91,003
PT. Batutua Tembaga Raya	36,291	-	-	(936)	35,355
PT. Tanggamus Electric Power	4,580	-	-	(276)	4,304
PT. Wampu Electric Power	5,519	-	-	(333)	5,186
PT. POSMI Steel Indonesia	2,316	-	-	(140)	2,176
Nickel Mining Company SAS	60,516	-	-	1,904	62,420
KRAKATAU POS-CHEM DONG-SUH CHEMICAL	6,947	-	(1,239)	(268)	5,440
POS-SeaAH Steel Wire (Thailand) Co., Ltd.	6,947	-	-	(419)	6,528
AMCI (WA) PTY LTD	78,553	5,550	-	(812)	83,291
POS-AUSTEM YANTAI AUTOMOTIVE CO.,LTD	5,789	-	-	(349)	5,440
POS-AUSTEM WUHAN AUTOMOTIVE CO.,LTD	9,262	-	-	(558)	8,704
Hyo-chun Co., Ltd.	2,382	-	-	-	2,382
Chun-cheon Energy Co., Ltd.	8,234	-	(8,234)	-	-
POS-AUSTEM Suzhou Automotive Co., Ltd	5,789	11,805	-	(1,274)	16,320
CAML RESOURCES PTY LTD	-	3,219	-	93	3,312
Shinahn Wind Power Generation	-	37	-	-	37
	₩ 449,070	33,484	(67,012)	(70,192)	355,350

(*1) During the year ended December 31, 2020, loans amounting to ₩60,278 million have been converted to shares of DMSA/AMSA, which is presented in others.

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

<i>(in millions of Won)</i>	2021	2020
Short-term benefits	₩ 111,900	109,546
Long-term benefits	18,115	15,288
Retirement benefits	22,239	16,238
	₩ <u>152,254</u>	<u>141,072</u>

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

38. Commitments and Contingencies

(a) Contingent liabilities

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

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

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

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

(b) Details of guarantees

- 1) Contingent liabilities on outstanding guarantees provided by the Company as of December 31, 2021 are as follows:

(in millions of Won)			Guarantee limit		Guarantee amount	
Guarantor	Guarantee beneficiary	Financial institution	Foreign currency	Won equivalent	Foreign currency	Won equivalent
[The Company]						
POSCO HOLDINGS INC.	POSCO Asia Co., Ltd.	Credit Agricole and others	USD	200,000,000	237,100	-
	POSCO-VIETNAM Co., Ltd.	SMBC and others	USD	156,000,000	184,938	140,000,000
	POSCO MEXICO S.A. DE C.V.	BDO and others	USD	120,000,000	142,260	100,000,001
	POSCO COATED STEEL (THAILAND) CO., LTD.	SMBC and others	THB	5,501,000,000	195,672	5,021,000,001
	POSCO Maharashtra Steel Private Limited	SMBC and others	USD	139,784,000	165,715	139,784,000
	PT. KRAKATAU POSCO	Export-Import Bank of Korea and others	USD	2,150,300,000	2,549,186	1,426,992,234
	POSCO ASSAN TST STEEL INDUSTRY	SOCIETE GENERALE and others	USD	146,527,500	173,708	131,874,750
	POSCO INTERNATIONAL GLOBAL DEVELOPMENT PTE. LTD.	Export-Import Bank of Korea and others	USD	180,000,000	213,390	180,000,000
	POSCO INTERNATIONAL POWER (P)NGLAIE LIMITED	KDB bank	USD	53,517,404	63,445	32,717,404
	GOLDEN LACE POSCO INTERNATIONAL CO., LTD.	Shinhan Bank and others	USD	11,000,000	13,041	11,000,000
POSCO INTERNATIONAL Corporation	PT. Bio Iné Agrindo	BTBN and others	IDR	2,057,400,000,000	170,970	2,057,400,000,000
	POSCO ASSAN TST STEEL INDUSTRY	ING	USD	14,652,750	17,371	14,652,750
	POSCO INTERNATIONAL Deutschland GmbH	Bank Mendes Gans				9,053,769
	POSCO INTERNATIONAL AMERICA Corp.					-
	POSCO INTERNATIONAL JAPAN Corp.					8,692,517
	POSCO INTERNATIONAL SINGAPORE Pte. Ltd.					-
	POSCO INTERNATIONAL Malaysia SDN BHD					-
	POSCO INTERNATIONAL Italia S.R.L.					-
	POSCO INTERNATIONAL MEXICO S.A. de C.V.		USD	50,000,000	59,275	-
	GRAIN TERMINAL HOLDING PTE. LTD.	Export-Import Bank of Korea and others	USD	27,000,000	32,009	27,000,000
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	POSCO E&C Vietnam Co., Ltd.	POSCO Asia Co., Ltd. and others	USD	36,000,000	42,678	36,000,000
	PT. POSCO E&C INDONESIA	POSCO Asia Co., Ltd. and others	USD	25,900,000	30,704	25,900,000
POSCO ICT	PT.POSCO ICT INDONESIA	POSCO Asia Co., Ltd. and others	USD	1,500,000	1,778	600,000
	PT. Krakatau Posco Chemical Calcination	POSCO Asia Co., Ltd. and others	USD	15,200,000	18,020	4,800,000
POSCO CHEMICAL CO., LTD	POSCO COATED & COLOR STEEL Co., Ltd.	POSCO Asia Co., Ltd.	USD	13,986,947	16,582	13,986,947
	POSCO ENERGY CO., LTD	POSCO Asia Co., Ltd. and others	USD	77,002,839	91,287	77,002,839
[Associates and joint ventures]						
POSCO HOLDINGS INC.	CSP - Compania Siderurgica do Pecem	Export-Import Bank of Korea and others	USD	420,000,000	497,911	368,324,800
		BINDES	BRL	464,060,000	98,743	464,060,000
POSCO INTERNATIONAL Corporation	LLP POSUK Titanium	SMBC	USD	13,500,000	16,004	13,500,000
	Nickel Mining Company SAS	SMBC	EUR	46,000,000	61,748	46,000,000
POSCO ENGINEERING	GLOBAL KOMSCO Daewoo LLC	Hana Bank	USD	8,225,000	9,751	7,000,000
	Chun-cheon Energy Co., Ltd	Kookmin Bank	KRW	149,200	149,200	145,900
[Others]						
POSCO INTERNATIONAL Corporation	SHERITT INTERNATIONAL CORP.	Export-Import Bank of Korea	USD	21,818,182	25,865	1,724,349
	Busan Sansong Tunnel and others	Baihae Infrastructure Fund and others	KRW	1,720,802	1,720,802	707,054
POSCO ENGINEERING & CONSTRUCTION CO., LTD.			KRW	7,618	7,618	6,391
	Busan Sansong Tunnel	Hana Bank and others	KRW			
POSCO ICT	Investment of Trade and Investment (NSW Government) and others	Woori Bank and others	AUD	14,665,087	12,596	14,665,095
	KSU Mandiri	Bank Muamalat	IDR	80,000,000,000	6,648	80,000,000,000
PT. Bio Iné Agrindo	MAHARASHTRA STATE ELECTRICITY and others	HSCB and others	INR	482,882,773	7,692	482,882,773
			USD	3,881,914,822	4,602,018	2,770,606,360
POSCO Maharashtra Steel Private Limited			KRW	1,877,620	1,877,620	859,345
			IDR	2,137,400,000,000	177,618	2,137,400,000,000
			INR	482,882,773	7,692	482,882,773
			THB	5,501,000,000	195,672	5,021,000,001
			EUR	46,000,000	61,748	46,000,000
			AUD	14,665,087	12,596	14,665,095
			BRL	464,060,000	98,743	464,060,000
						98,743

- 2) Contingent liabilities on debt acquisition, financial support agreement provided by the Company as of December 31, 2021 are as follows:

(in millions of Won)			Agreed amount		Executed amount	
Provider	Recipient	Creditor	Foreign currency	Won equivalent	Foreign currency	Won equivalent
[The Company]						
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	JB CLARK HILLS	HSBC and others	USD	51,000,000	60,461	35,500,000
[Associates and joint ventures]						
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	New Songdo International City Development, LLC	Others	KRW	620,000	620,000	537,000
	POHANG E&E Coi., LTD	Heunguk Life Insurance Co., Ltd.	KRW	71,930	71,930	54,903
	UITrans LRT Co., Ltd	Kookmin Bank and others	KRW	200,632	200,632	184,416
	Western Inland highway CO.,LTD.	Nonghyup Bank and others	KRW	672,496	672,496	8,820
	Pocheon-Hwado Highway Corp.					
	(formerly, Metropolitan Outer Ring Expressway Co., Ltd)	Lotte Insurance Co., Ltd and others	KRW	276,033	276,033	39,649
	RPSD	Plan-up Sinsajelcha Co., Ltd	KRW	45,000	45,000	37,000
	Pureun Tongyeong Enviro Co., Ltd.	KDB Bank and others	KRW	22,714	22,714	14,067
	Pure Gimpco Co.,Ltd	KDB Bank and others	KRW	44,740	44,740	29,153
	Clean Iksan Co.,Ltd	SAMSUNG FIRE & MARINE INSURANCE	KRW	44,054	44,054	28,198
POSCO ICT	UITrans LRT Co., Ltd	Kookmin Bank	KRW	38,147	38,147	38,147
	Western Inland highway CO.,LTD.	Kookmin Bank	KRW	47,348	47,348	600
	Pocheon-Hwado Highway Corp.					
	(formerly, Metropolitan Outer Ring Expressway Co., Ltd)	Woori Bank	KRW	24,920	24,920	1,308
[Others]						
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	Incheon - Gimpo Expressway Co., Ltd and others	Kookmin Bank and others	KRW	3,117,808	3,117,808	1,554,052
POSCO ICT	Incheon - Gimpo Expressway Co., Ltd and others	Kookmin Bank and others	KRW	166,678	166,678	85,687

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

(c) Other commitments

Details of other commitments of the Company as of December 31, 2021 are as follows:

Company	Description
POSCO HOLDINGS INC.	<p>POSCO HOLDINGS INC. 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.</p> <p>POSCO HOLDINGS INC. 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.</p> <p>POSCO HOLDINGS INC. has a long-term service contract for the transportation of raw material. As of December 31, 2021, there are 37 vessels under contract, and the average remaining contract period is about 9 years.</p> <p>As of December 31, 2021, POSCO HOLDINGS INC. entered into a commitment with KOREA ENERGY AGENCY for long-term foreign currency borrowings, which are 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 borrowings depends on the success of the projects. POSCO HOLDINGS INC. is not liable for the repayment of full or part of the amount borrowed if the respective projects fail. POSCO HOLDINGS INC. 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.</p> <p>POSCO HOLDINGS INC. has provided a supplemental funding agreement, as the largest shareholder, as requested from the creditors, including Norddeutsche Landesbank, for seamless funding to POSCO ENERGY Co., Ltd., a subsidiary of the Company, under construction of new power plant.</p> <p>POSCO HOLDINGS INC. 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.</p>
POSCO INTERNATIONAL Corporation	<p>POSCO INTERNATIONAL Corporation operates a ship-to-ship business in which ships are chartered from ship's owners and leased out to shippers. The Company has entered into a ship purchase agreement with the ship owners and the shippers, which obliges the shippers to pay the agreed amount either at the end of the contract terms or at the agreed termination and to take over the ownership of the vessel from the ship owners. Only if the shipper fails to fulfill its obligation including payment obligation for the purchase of the vessel, the Company is obliged to take over the ship based on the condition that the shipper's contractual obligations and rights are transferred to the Company. As of December 31, 2021, the amount which is exposed to the ship purchase agreements entered into is USD 170 million.</p> <p>The Company invested in the Ambatovy Nickel Project (DMSA/AMSA) in Madagascar through the Korea Ambatovy Consortium (KAC) formed with Korea Mine Rehabilitation and Mineral Resources Corporation (KOMIR) and STX Corporation. SHERRITT INTERNATIONAL CORP., the operator, transferred a portion of the project's interests to Sumitomo and AHL (Ambatovy Holdings Limited) in November 2017, and transferred the remaining interests of the project to Sumitomo and AHL2 (Ambatovy Holdings II Limited) in August 2020. KAC has the rights and obligations to the 15.33% stake held by AHL and AHL2.</p>
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	<p>As of December 31, 2021, POSCO ENGINEERING & CONSTRUCTION CO., LTD. has foreign currency guarantees of up to USD 2,419 million provided by financial institutions and uses USD 758 million with Woori Bank and others.</p> <p>As of December 31, 2021, according to the project agreements related to redevelopment and reconstruction projects, the Company has an agreement to compensate the Korea Housing and Urban Guarantee Corporation for damages of principal and interest amounting to ₩1,383,070 million (limited to ₩3,002,609 million). Furthermore, the Company provides agreements of construction completion (compensation for non-performance) in connection with a number of implementation and union business projects.</p>
POSCO ICT	<p>As of December 31, 2021, in relation to contract enforcement, POSCO ICT is provided with a guarantee of ₩147,108 million, ₩26,464 million, ₩305 million from Software credit union and Seoul guarantee insurance, Engineering credit union respectively.</p>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

(d) Litigation in progress

1) Request for Arbitration of NSC Investment and TGC

In March 2019, NSC Investment and TGC("Applicant"), a former joint venture partner of POSCO ENGINEERING & CONSTRUCTION CO., LTD., in connection with the Songdo International City Development Project in Incheon, filed an arbitration (mediation price: approximately USD 2 billion) for alleged violations of contract by POSCO ENGINEERING & CONSTRUCTION CO., LTD. As of December 31, 2021, the Company has determined that the applicant's claim is without merit, and did not recognize any provision.

2) Other litigation

As of December 31, 2021, litigations in progress that POSCO HOLDINGS INC. and certain subsidiaries are defendants in legal actions arising from the normal course of business are as follows:

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

Company	Legal actions	Claim amount	Won equivalent	Description
POSCO HOLDINGS INC.	36	KRW 140,410	140,410	Lawsuit on claim for employee right and others
POSCO INTERNATIONAL Corporation	1	BRL 72,774	15,485	Lawsuit on claim for payment for goods
	1	CAD 79,000	73,518	Lawsuit on claim for damages
	2	CNY 21,605	4,024	Lawsuit on claim for damages and others(*1)
	2	INR 4,469,396	71,197	Lawsuit on claim for payment on guarantees and others(*1)
	9	KRW 26,235	26,235	Litigation for confirmation of deposit bond and others
	6	USD 73,511	87,148	Lawsuit on claim for damages and others(*1)
	1	PKR 124,775	830	Lawsuit on claim for damages
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	98	KRW 397,711	397,711	Lawsuit on claim for damages and others(*1)
POSCO ICT	1	BRL 7,586	1,614	Lawsuit on claim for damage(*1)
	8	KRW 5,637	5,637	Lawsuit on claim for damages and others(*1)
POSCO A&C	10	KRW 13,097	13,097	Lawsuit on claim for payment on construction and others(*1)
POSCO America Corporation	1	USD -	-	Lawsuit on claim for labor
POSCO ENERGY CO., LTD.	4	KRW 14,357	14,357	Lawsuit on claim for damages and others
	2	USD 400,000	474,200	Lawsuit on claim for damages and others
POSCO E&C CHINA CO., LTD.	4	CNY 31,051	5,784	Lawsuit over contract dispute and others(*1)
POSCO O&M Co., Ltd.	4	KRW 2,256	2,256	Lawsuit on claim for damages and others
POSCO ENGINEERING (THAILAND) CO., LTD.	1	THB 160,929	5,724	Lawsuit on claim for payment on construction
eNtoB Corporation	2	KRW 133	133	Lawsuit on claim for damages
POSCO E&C Vietnam Co., Ltd.	1	USD 211	250	Lawsuit on claim for payment on construction
POSCO SOUTH EAST ASIA PTE. LTD.	2	USD 15,900	18,849	Lawsuit over contract dispute
POSCO TNPC Otomotiv Celik San. Ve Tic. A.S	4	TRY 232	21	Lawsuit over industrial accidents and others(*1)
Brazil Sao Paulo Steel Processing Center	4	BRL 3,844	818	Lawsuit on claim for labor and others
POSCO ENGINEERING & CONSTRUCTION DO BRAZIL LTDA.	89	BRL 194,834	41,457	Lawsuit on claim for payment on construction and others(*1)
POSCO ASSAN TST STEEL INDUSTRY	1	USD 180	214	Lawsuit on compensation(*1)
POSCO TMC INDIA PRIVATE LIMITED	2	INR -	-	Lawsuit on claim for employee laid-off and others
POSCO INDIA PROCESSING CENTER PRIVATE LIMITED	1	INR 54,420	867	Lawsuit on claim for damages
POSCO-India Pune Processing Center. Pvt. Ltd.	1	INR 2,197,800	35,011	Lawsuit over contract dispute
POSCO CHEMICAL CO., LTD	1	KRW 15,383	15,383	Calculation of stock purchase value
POSCO M-TECH	2	KRW 70	70	Lawsuit on claim for damages and others
POSCO Engineering and Construction India Private Limited	2	INR 493,968	7,869	Lawsuit on claim for payment and others
POSCO INTERNATIONAL AMERICA Corp.	1	USD 2,500	2,964	Lawsuit on claim for damages
HONG KONG POSCO E&C (CHINA) INVESTMENT Co., Ltd.	1	KRW 3,305	3,305	Lawsuit on claim for payment
POSCO Thainox Public Company Limited	1	THB 3,000	107	Lawsuit on invalidation of a check
POSCO MOBILITY SOLUTION (formerly, POSCO SPS CORPORATION)	2	KRW 300	300	Lawsuit on claim for damages and others
POSCO INTERNATIONAL VIETNAM CO., LTD.	1	VND 579,407	30	Lawsuit over contract dispute
QINGDAO POHANG STAINLESS STEEL CO., LTD.	5	CNY 56,194	10,467	Lawsuit over contract dispute and others
POSCO(Yantai) Automotive Processing Center Co., Ltd	2	CNY 313	58	Lawsuit on claim for labor and others
POSCO INTERNATIONAL (CHINA) CO., LTD	1	CNY 12,350	2,300	Lawsuit over contract dispute
POSCO(Dalian) IT Center Development Co., Ltd.	1	CNY 54	10	Lawsuit on claim for damages

(*1) The Company made a reliable estimate in 71 lawsuits by considering the possibility and amount of expected outflow of resources and recognized ₩61,911 million as provision for legal contingencies and claims.

For all the other lawsuits and claims, management does not believe the Company has any present obligations and therefore, the Company has not recognized any provisions as of December 31, 2021 for the matters.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries

Notes to the Consolidated Financial Statements, Continued

As of December 31, 2021 and 2020

(e) Other contingencies

Other major contingencies for the Company as of December 31, 2021 are as follows:

Company	Description
POSCO HOLDINGS INC.	POSCO HOLDINGS INC. has provided 3 blank checks to Korea Energy Agency as collateral for long-term foreign currency borrowings.
POSCO INTERNATIONAL Corporation	As of December 31, 2021, POSCO INTERNATIONAL Corporation has provided 30 blank promissory notes and 23 blank checks to Korea Energy Agency and others as collateral for the guarantee on performance for contracts and others.
POSCO ENGINEERING & CONSTRUCTION CO., LTD.	As of December 31, 2021, POSCO ENGINEERING & CONSTRUCTION CO., LTD. has provided 36 blank checks and 4 blank promissory notes as collateral for agreements and outstanding loans, and has provided joint guarantee of ₩9,241,211 million for guarantee that partners had issued from Korea Housing & Urban Guarantee Corporation and others.
POSCO ICT	As of December 31, 2021, POSCO ICT has provided 8 blank checks to financial institutions as collateral for the guarantee on performance for contracts and others.

39. Statements of Cash Flows

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

(in millions of Won)	2021	2020
Trade accounts and notes receivable	₩ (1,565,327)	816,797
Other receivables	(441,412)	210,630
Inventories	(6,049,837)	1,717,885
Other current assets	(210,614)	51,750
Other non-current assets	(246,066)	(92,068)
Trade accounts and notes payable	1,401,942	594,414
Other payables	170,209	(78,997)
Other current liabilities	410,745	(27,932)
Provisions	(154,471)	(82,146)
Payments of severance benefits	(253,207)	(225,293)
Plan assets	(186,548)	(94,121)
Other non-current liabilities	54,012	12,667
	₩ (7,070,574)	2,803,586

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

1) December 31, 2021

(in millions of Won)

	Liabilities				Derivatives that hedge borrowings
	Short-term borrowings	Long-term borrowings	Dividend payable	Finance lease liabilities	
Beginning	₩ 5,194,395	15,303,212	2,703	739,675	178,988
Changes from financing cash flows	(329,897)	639,414	(1,327,414)	(281,288)	(11,338)
Changes arising from obtaining or losing control of subsidiaries or other business	-	41,359	-	-	-
The effect of changes in foreign exchange rates	245,926	689,078	-	57,814	-
Changes in fair values	-	(54,057)	-	-	(59,668)
Other changes:					
Decrease in retained earnings	-	-	1,259,272	-	-
Decrease in non-controlling interest	-	-	69,485	-	-
Interest expenses	-	11,786	-	22	-
Increase in lease assets	-	-	-	261,791	-
Ending	₩ 5,110,424	16,630,792	4,046	778,014	107,982

2) December 31, 2020

(in millions of Won)

	Liabilities				Derivatives that hedge borrowings
	Short-term borrowings	Long-term borrowings	Dividend payable	Finance lease liabilities	
Beginning	₩ 5,486,333	14,955,280	3,105	675,470	15,524
Changes from financing cash flows	35,525	766,330	(675,684)	(217,312)	4,096
Changes arising from obtaining or losing control of subsidiaries or other business	-	-	-	-	-
The effect of changes in foreign exchange rates	(327,463)	(432,082)	-	(29,728)	-
Changes in fair values	-	-	-	-	159,368
Other changes:					
Decrease in retained earnings	-	-	607,411	-	-
Decrease in non-controlling interest	-	-	67,871	-	-
Interest expenses	-	13,684	-	10	-
Increase in lease assets	-	-	-	311,235	-
Ending	₩ 5,194,395	15,303,212	2,703	739,675	178,988

40. Operating Segments and Geographic Information

- (a) The Company's operating businesses are organized based on the nature of markets and customers. The Company has four reportable operating segments - steel, construction, trading and others. The steel segment includes production of steel products and revenue of such products. The construction segment includes planning, designing and construction of industrial plants, civil engineering projects and commercial and residential buildings, both in Korea and overseas. The trading segment consists of exporting and importing a wide range of steel products and raw materials that are both obtained from and supplied to POSCO, as well as between other suppliers and purchasers in Korea and overseas. Other segments include power generation, network and system integration and logistics.
- (b) The segment profit or loss does not reflect the consolidation adjustments allocated to each entity and is determined in the same way as the consolidated profit determined by K-IFRS. Segment assets and liabilities are determined based on separate financial statements. There are various transactions of transactions between reporting segments, including disposal of property, plant and equipment and provision of construction services.

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(c) Information about reportable segments as of and for the years ended December 31, 2021 and 2020 were as follows:

1) As of and for the year ended December 31, 2021

<i>(in millions of Won)</i>		Steel	Trading	Construction	Others	Total
External revenues	₩	41,093,405	25,065,608	6,398,366	3,774,966	76,332,345
Internal revenues		22,455,511	20,224,841	1,014,148	3,012,917	46,707,417
Including inter segment revenue		14,940,813	10,653,742	940,408	2,800,594	29,335,557
Total revenues		63,548,916	45,290,449	7,412,514	6,787,883	123,039,762
Interest income		179,841	30,265	72,830	35,305	318,241
Interest expenses		(313,769)	(100,419)	(39,134)	(61,152)	(514,474)
Depreciation and amortization		(3,000,179)	(343,489)	(69,777)	(271,898)	(3,685,343)
Impairment loss on property, plant and equipment and others		(249,645)	(66,157)	(10)	(36,774)	(352,586)
Share of loss of equity-accounted investees, net		(261,363)	(70,321)	(45,778)	(11,874)	(389,336)
Income tax expense		(2,045,079)	(101,622)	(116,799)	(66,927)	(2,330,427)
Segment profit		6,587,903	324,888	164,276	360,883	7,437,950
Segment total assets		80,953,507	16,373,409	8,136,549	11,923,740	117,387,205
Investment in subsidiaries, associates and joint ventures		16,567,555	2,066,688	538,484	1,195,600	20,368,327
Acquisition of non-current assets		2,194,346	478,278	10,233	928,947	3,611,804
Segment total liabilities		25,714,577	11,049,017	4,451,055	5,379,210	46,593,859

2) As of and for the year ended December 31, 2020

<i>(in millions of Won)</i>		Steel	Trading	Construction	Others	Total
External revenues	₩	28,892,877	19,345,222	6,576,170	2,978,527	57,792,796
Internal revenues		15,365,443	12,946,803	1,033,821	2,609,941	31,956,008
Including inter segment revenue		10,545,577	6,413,835	965,409	2,442,961	20,367,782
Total revenues		44,258,320	32,292,025	7,609,991	5,588,468	89,748,804
Interest income		233,833	44,528	103,974	22,607	404,942
Interest expenses		(467,767)	(127,800)	(60,768)	(69,152)	(725,487)
Depreciation and amortization		(3,040,316)	(313,134)	(71,144)	(236,763)	(3,661,357)
Impairment loss on property, plant and equipment and others		(37,623)	(8,226)	(32,184)	(224)	(78,257)
Share of loss of equity-accounted investees, net		(409,889)	(116,074)	(65,409)	(17,631)	(609,003)
Income tax expense		(77,682)	(92,589)	(57,178)	(72,929)	(300,378)
Segment profit		711,883	157,152	150,021	293,513	1,312,569
Segment total assets		71,105,618	13,152,462	7,658,130	9,356,528	101,272,738
Investment in subsidiaries, associates and joint ventures		15,425,607	1,958,333	603,752	907,645	18,895,337
Acquisition of non-current assets		2,819,217	180,005	36,385	451,158	3,486,765
Segment total liabilities		20,976,864	8,804,555	4,260,003	4,896,040	38,937,462

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

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

1) Revenues

<i>(in millions of Won)</i>		2021	2020
Total revenue for reportable segments	₩	123,039,762	89,748,804
Elimination of inter-segment revenue		(46,707,417)	(31,956,008)
	₩	<u>76,332,345</u>	<u>57,792,796</u>

2) Profit

<i>(in millions of Won)</i>		2021	2020
Total profit for reportable segments	₩	7,437,950	1,312,569
Goodwill and corporate FV adjustments		(62,500)	(74,685)
Elimination of inter-segment profit		(179,560)	550,268
Income tax expense		2,220,183	236,934
Profit before income tax expense	₩	<u>9,416,073</u>	<u>2,025,086</u>

3) Assets

<i>(in millions of Won)</i>		2021	2020
Total assets for reportable segments	₩	117,387,205	101,272,738
Investment in subsidiaries, associates and joint ventures		(15,532,200)	(14,697,612)
Goodwill and corporate FV adjustments		2,411,729	2,518,590
Elimination of inter-segment assets		(12,795,120)	(10,006,743)
	₩	<u>91,471,614</u>	<u>79,086,973</u>

4) Liabilities

<i>(in millions of Won)</i>		2021	2020
Total liabilities for reportable segments	₩	46,593,859	38,937,462
Goodwill and corporate FV adjustments		236,833	263,490
Elimination of inter-segment liabilities		(10,164,021)	(7,788,571)
	₩	<u>36,666,671</u>	<u>31,412,381</u>

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

5) Other significant items

a) December 31, 2021

(in millions of Won)

	Total segment	Goodwill and corporate FV adjustments	Elimination of inter-segment transactions	Consolidated
Interest income	₩ 318,241	-	(25,999)	292,242
Interest expenses	(514,474)	605	74,044	(439,825)
Depreciation and amortization	(3,685,343)	(88,927)	194,824	(3,579,446)
Share of profit of equity-accounted investees, net	(389,336)	-	1,038,905	649,569
Income tax expense	(2,330,427)	25,719	84,525	(2,220,183)
Impairment loss on property, plant and equipment and others	(352,586)	-	(183,262)	(535,848)

b) December 31, 2020

(in millions of Won)

	Total segment	Goodwill and corporate FV adjustments	Elimination of inter-segment transactions	Consolidated
Interest income	₩ 404,942	-	(32,768)	372,174
Interest expenses	(725,487)	806	85,884	(638,797)
Depreciation and amortization	(3,661,357)	(102,385)	142,002	(3,621,740)
Share of profit of equity-accounted investees, net	(609,003)	-	742,300	133,297
Income tax expense	(300,378)	27,655	35,789	(236,934)
Impairment loss on property, plant and equipment and others	(78,257)	(761)	(150,828)	(229,846)

(e) Revenue by geographic area for the years ended December 31, 2021 and 2020 was as follows:

(in millions of Won)

	2021	2020
Domestic	₩ 49,732,699	36,806,651
Japan	2,200,855	1,788,839
China	7,146,695	7,238,063
Indonesia	2,546,732	1,385,059
Asia-other	8,878,781	6,511,982
North America	2,083,309	1,308,943
Europe	2,172,064	1,649,140
Others	1,571,210	1,104,119
	₩ 76,332,345	57,792,796

POSCO HOLDINGS INC. (formerly, POSCO) and Subsidiaries
Notes to the Consolidated Financial Statements, Continued
As of December 31, 2021 and 2020

(f) Non-current assets by geographic area as of December 31, 2021 and 2020 are as follows:

<i>(in millions of Won)</i>		2021	2020
Domestic	₩	27,806,262	27,652,233
Japan		155,556	168,269
China		1,175,593	1,245,181
Indonesia		2,376,777	2,386,862
Asia-other		1,822,205	1,897,618
North America		313,356	275,245
Europe		271,035	266,368
Others		928,300	952,578
	₩	<u>34,849,084</u>	<u>34,844,354</u>

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

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

41. Events after the Reporting Period

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 expected date of the Spin-off is March 1, 2022.