Interim condensed c onsolidated f inancial s tatements for the six month period ended June 30 , 2024 with the independent auditor's review report

POSCO HOLDINGS INC. and its subsidiaries

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Report on review of interim condensed consolidated financial statements

(English translation of a report originally issued in Korean)

The Stockholders and Board of Directors POSCO HOLDINGS INC.

We have reviewed the accompanying interim condensed consolidated financial statements of POSCO HOLDINGS INC. and its subsidiaries (collectively referred to as the "Group"), which comprise the interim condensed consolidated statement of financial position as of June 30, 2024, and the related interim condensed consolidated statements of comprehensive income for the three-month and sixmonth periods ended June 30, 2024, the interim condensed consolidated statement of changes in equity and interim condensed consolidated statement of cash flows for the six-month period ended June 30, 2024, and a summary of material accounting policy information and other explanatory information.

Management's responsibility for the interim condensed consolidated financial statements

Management is responsible for the preparation and presentation of these interim condensed consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("KIFRS") 1034 *Interim Financial Reporting*, and for such internal control as management determines is necessary to enable the preparation of interim condensed consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express a conclusion on these interim condensed consolidated financial statements based on our review.

We conducted our review in accordance with the Review Standards for Quarterly and Semiannual Financial Statements established by the Securities and Futures Commission of the Republic of Korea. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Korean Standards on Auditing ("KSA") and, consequently, does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the accompanying interim condensed consolidated financial statements are not prepared, in all material respects, in accordance with KIFRS 1034 *Interim Financial Reporting*.



Other matters

The interim condensed consolidated statements of comprehensive income for the three-month and sixmonth periods ended June 30, 2023, and interim condensed consolidated statement of changes in equity and interim condensed consolidated statement of cash flows for the six-month period ended June 30, 2023, prepared in accordance with KIFRS 1034 and presented for comparative purposes, have been reviewed by Samjong KPMG, whose review report dated August 11, 2023 expressed an unqualified review conclusion thereon.

Moreover, the consolidated statement of financial position as of December 31, 2023, and the related consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended (not presented herein) have been audited by Samjong KPMG, in accordance with KSA, whose report dated March 13, 2024 expressed an unqualified opinion thereon. The accompanying consolidated statement of financial position as of December 31, 2023, presented for comparative purposes, is not different, in all material respects, from the above audited consolidated statement of financial position.



August 14, 2024

This review report is effective as of August 14, 2024, the independent auditor's review report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditor's review report to the time this review report is used. Such events and circumstances could significantly affect the accompanying interim condensed consolidated financial statements and may result in modification to this review report.

POSCO HOLDINGS INC. and its subsidiaries
Interim condensed consolidated financial statements for each of the six-month periods ended June 30, 2024 and 2023
"The accompanying interim condensed consolidated financial statements, including all footnotes and disclosures, have been prepared by, and are the responsibility of, the Group."

Kisub Jung Chief Strategy Officer POSCO HOLDINGS INC.

Interim condensed consolidated statements of financial position as of June 30, 2024 (Unaudited) and December 31, 2023

(in millions of Won)	Notes	June 30, 2024 (unaudited)	December 31, 2023
Assets			
Cash and cash equivalents	21 W	8,034,419	6,670,879
Trade accounts and notes receivable, net	4,15,21,25,26,33	11,405,228	11,015,303
Other receivables, net	5,21,33	2,185,490	1,947,529
Other short-term financial assets	6,21	11,173,254	11,403,166
Inventories	7	13,485,582	13,825,514
Current income tax assets		64,062	101,979
Assets held for sale	8	7,917	406,945
Other current assets	14	826,395	840,984
Total current assets	_	47,182,347	46,212,299
Long-term trade accounts and notes receivable, net	4,21	31,560	42,516
Other receivables, net	5,21,33	1,497,305	1,452,445
Other long-term financial assets	6,21	2,943,922	2,708,325
Investments in associates and joint ventures	9	5,272,111	5,020,264
Investment property, net	11	1,661,852	1,616,294
Property, plant and equipment, net	12	38,146,233	35,206,248
Intangible assets, net	13	4,695,072	4,714,784
Defined benefit assets, net	19	484,865	464,758
Deferred tax assets		3,243,404	3,334,266
Other non-current assets	14	128,397	173,195
Total non-current assets	_	58,104,721	54,733,095
Total assets	₩ <u>_</u>	105,287,068	100,945,394

(continued)

Interim condensed consolidated statements of financial position, continued as of June 30, 2024 (Unaudited) and December 31, 2023

(in millions of Won)	Notes	June 30, 2024 (unaudited)	December 31, 2023
Liabilities			
Trade accounts and notes payable	21,33 ₩	5,712,870	5,782,825
Short-term borrowings and current installments			
of long-term borrowings	15,21	12,234,843	10,959,217
Other payables	16,21,33	3,089,680	2,737,478
Other short-term financial liabilities	17,21	241,362	163,626
Current income tax liabilities		224,792	319,096
Liabilities directly associated with the assets held for sale	8		141,890
Provisions	18	463,984	419,744
Other current liabilities	20,25,26	1,310,194	1,337,642
Total current liabilities		23,277,725	21,861,518
Long-term borrowings, excluding current installments	15,21	16,424,863	15,011,163
Other payables	16,21	860,136	873,565
Other long-term financial liabilities	17,21	88,252	153,782
Defined benefit liabilities, net	19	70,926	38,754
Deferred tax liabilities		2,765,340	2,760,234
Long-term provisions	18	482,011	468,009
Other non-current liabilities	20	105,703	114,472
Total non-current liabilities		20,797,231	19,419,979
Total liabilities		44,074,956	41,281,497
Equity			
Share capital	22	482,403	482,403
Capital surplus	22	1,656,017	1,663,334
Other equity items	23	628,197	67,256
Treasury shares	24	(1,889,658)	(1,889,658)
Retained earnings		54,570,265	53,857,514
Equity attributable to owners of the controlling company		55,447,224	54,180,849
Non-controlling interests		5,764,888	5,483,048
Total equity		61,212,112	59,663,897
Total liabilities and equity	₩	105,287,068	100,945,394

The accompanying notes are an integral part of the interim condensed consolidated financial statements.

Interim condensed consolidated statements of comprehensive income for each of the three-month and six-month periods ended June 30, 2024 and 2023 (Unaudited)

			For the three-m ended Ju (unaudi	ne 30	For the six-mor ended Jur (unaudit	ne 30
(in millions of Won, except per share information)	Notes		2024	2023	2024	2023
Revenue Cost of sales	25,26,33 26,30	₩	18,509,681 (17,014,684)	20,121,371 (18,087,528)	36,561,631 (33,737,801)	39,502,249 (36,094,970)
Gross profit			1,494,997	2,033,843	2,823,830	3,407,279
Selling and administrative expenses Other administrative expenses Selling expenses	21,27,30		(698,199) (44,798)	(651,067) (56,547)	(1,383,647) (105,161)	(1,256,495) (119,852)
Operating profit			752,000	1,326,229	1,335,022	2,030,932
Share of profit of equity-accounted investees, net	9		96,361	67,916	174,180	181,715
Finance income and costs Finance income Finance costs	21,28		1,088,022 (1,153,190)	977,258 (1,138,634)	2,522,323 (2,411,372)	2,660,809 (2,711,477)
Other non-operating income and expenses Other non-operating income Other non-operating expenses	21,29,30		69,267 (132,935)	35,865 (238,737)	126,696 (294,813)	312,951 (443,776)
Profit before income tax Income tax expense	31	_	719,525 (173,305)	1,029,897 (253,932)	1,452,036 (298,001)	2,031,154 (414,884)
Profit			546,220	775,965	1,154,035	1,616,270
Other comprehensive income (loss) Items that will not be reclassified subsequently to profit or loss: Capital adjustment arising from investments in subsidiaries under equity method Foreign currency translation differences Remeasurements of defined benefit plans Net changes in fair value of equity investments at fair value through	19		(52) 56,988 (3,702)	(77) (17,817) 12,147	983 115,642 1,816	1,747 38,081 (17,166)
other comprehensive income Items that are or may be reclassified subsequently to profit or loss: Capital adjustment arising from investments in subsidiaries under equity method Foreign currency translation differences Gains or losses on valuation of derivatives	21		(84,595) 121,543 311,283	7,852 (16,923) (70,573)	(76,947) 198,692 515,888	149,866 212,274 178,470
Other comprehensive income (loss), net of tax	21	_	385 401,850	(241) (85,632)	(22) 756,052	(1,180)
Total comprehensive income		Δ/	948,070	690,333	1,910,087	2,178,362
Profit attributable to:		··-	540,070	000,000	1,010,007	2,170,002
Owners of the controlling company Non-controlling interests		₩	529,933 16,287	689,733 86,232	1,070,649 83,386	1,416,152 200,118
Profit		₩	546,220	775,965	1,154,035	1,616,270
Total comprehensive income attributable to: Owners of the controlling company Non-controlling interests		₩	870,116 77,954	616,916 73,417	1,677,787 232,300	1,942,180 236,182
Total comprehensive income		₩	948,070	690,333	1,910,087	2,178,362
Earnings per share (in Won) Basic earnings per share (in Won) Diluted earnings per share (in Won)	32	₩	6,984 6,157	9,090 9,090	14,110 11,881	18,667 18,667

The accompanying notes are an integral part of the interim condensed consolidated financial statements.

Interim condensed consolidated statements of changes in equity for each of the six-month periods ended June 30, 2024 and 2023 (Unaudited)

(in millions of Won)	_		Attribut	Non-					
	_	Share capital	Capital surplus	Other equity items	Treasury shares	Retained earnings	Subtotal	controlling interests	Total
Balance as of January 1, 2023	₩	482,403	1,400,832	(443,990)	(1,892,308)	52,965,179	52,512,116	5,745,285	58,257,401
Comprehensive income:									
Profit		-	-	-	-	1,416,152	1,416,152	200,118	1,616,270
Other comprehensive income (loss)									
Remeasurements of defined benefit plans, net of tax		-	-	-	-	(9,185)	(9,185)	(7,981)	(17,166)
Capital adjustment arising from investments									
in equity-accounted investees, net of tax		-	-	207,592	-	-	207,592	6,429	214,021
Net changes in fair value of equity investments				4.40.000					
at fair value through other comprehensive income, net of tax		-	-	149,399	-	467	149,866	-	149,866
Foreign currency translation differences, net of tax		-	-	178,470	-	-	178,470	38,081	216,551
Gains or losses on valuation of derivatives, net of tax	_		-	(715)		 -	(715)	(465)	(1,180)
Total comprehensive income	_			534,746		1,407,434	1,942,180	236,182	2,178,362
Transactions with owners of the controlling company,									
recognized directly in equity:									
Year-end dividends		-	-	-	-	(151,698)	(151,698)	(93,390)	(245,088)
Interim dividends		-	-	-	-	(189,692)	(189,692)	-	(189,692)
Changes in ownership interest in subsidiaries		-	247,717	(27,263)	-	-	220,454	(140,060)	80,394
Interest of hybrid bonds		-	-	-	-	-	-	(7,726)	(7,726)
Repayment of hybrid bonds		-	-	-	-	-	-	(199,837)	(199,837)
Disposal of treasury shares		-	4,083	-	5,864	-	9,947	-	9,947
Share based payments		-	(4,037)	- (0.4)	-	- 1 107	(4,037)	- (4.075)	(4,037)
Others	_		674	(84)		1,497	2,087	(1,975)	112
Total transactions with owners of the controlling company	_	<u> </u>	248,437	(27,347)	5,864	(339,893)	(112,939)	(442,988)	(555,927)
Balance as of June 30, 2023	₩_	482,403	1,649,269	63,409	(1,886,444)	54,032,720	54,341,357	5,538,479	59,879,836

(continued)

Interim condensed consolidated statements of changes in equity, continued for each of the six-month periods ended June 30, 2024 and 2023 (Unaudited)

(in millions of Won)	_		Attribut						
	<u>-</u>	Share capital	Capital surplus	Other equity items	Treasury shares	Retained earnings	Subtotal	Non- controlling interests	Total
Balance as of January 1, 2024	₩	482,403	1,663,334	67,256	(1,889,658)	53,857,514	54,180,849	5,483,048	59,663,897
Comprehensive income:									
Profit		-	-	-	-	1,070,649	1,070,649	83,386	1,154,035
Other comprehensive income (loss)									
Remeasurements of defined benefit plans, net of tax		-	-	-	-	2,797	2,797	(981)	1,816
Capital adjustment arising from investments in equity-accounted investees, net of tax		-	-	165,557	-	-	165,557	34,120	199,677
Net changes in fair value of equity investments		-	-	(95,570)	-	18,660	(76,910)	(37)	(76,947)
at fair value through other comprehensive income, net of tax Foreign currency translation differences, net of tax				515,887			515,887	115,642	631,529
Gains or losses on valuation of derivatives, net of tax		-	-		-	-			*
Gains of losses on valuation of derivatives, het of tax	_			(193)			(193)	171	(22)
Total comprehensive income	_			585,681		1,092,106	1,677,787	232,301	1,910,088
Transactions with owners of the controlling company, recognized directly in equity:									
Year-end dividends		-	-	-	-	(189,691)	(189,691)	(83,218)	(272,909)
Interim dividends		-	-	-	-	(189,691)	(189,691)	-	(189,691)
Changes in subsidiaries		-	-	-	-	-	-	36,505	36,505
Changes in ownership interest in subsidiaries		-	(9,444)	-	-	-	(9,444)	111,704	102,260
Share based payments		-	(2,567)	-	-	-	(2,567)	-	(2,567)
Others	_	-	4,694	(24,740)		27	(20,019)	(15,452)	(35,471)
Total transactions with owners of the controlling company	_		(7,317)	(24,740)		(379,355)	(411,412)	49,539	(361,873)
Balance as of June 30, 2024	₩	482,403	1,656,017	628,197	(1,889,658)	54,570,265	55,447,224	5,764,888	61,212,112

The accompanying notes are an integral part of the interim condensed consolidated financial statements.

POSCO HOLDINGS INC. and its subsidiaries Interim condensed consolidated statements of cash flows for each of the six-month periods ended June 30, 2024 and 2023 (Unaudited)

			For the six-month	
(in millions of Won)	Notes		June 30, 2024 (unaudited)	June 30, 2023 (unaudited)
Cash flows from operating activities				
Profit		₩	1,154,035	1,616,270
Adjustments for:				
Depreciation			1,688,062	1,645,824
Amortization			236,561	242,477
Finance income			(1,759,462)	(1,611,324)
Finance costs			1,651,499	1,672,318
Income tax expense			298,001	414,884
Impairment loss on property, plant and equipment			63,122	143,257
Gain on disposal of property, plant and equipment			(12,050)	(5,499)
Loss on disposal of property, plant and equipment			36,340	67,666
Impairment loss on goodwill and other intangible assets			11	4,772
Gain on disposal of investments				
in subsidiaries, associates and joint ventures			(7,096)	(184,844)
Loss on disposal of investments				
in subsidiaries, associates and joint ventures			42,594	4,401
Share of profit of equity-accounted investees			(174,180)	(181,715)
Loss on disposal of assets held for sale			34,812	102,470
Expenses related to post-employment benefit			122,762	99,210
Impairment loss on trade and other receivables			29,811	21,695
Loss on valuation of inventories			92,569	97,107
Increase (decrease) to provisions			33,725	(7,019)
Others, net			(20,274)	(39,554)
			2,356,807	2,486,126
Changes in operating assets and liabilities	35		(272,652)	(1,886,839)
Interest received			284,604	201,354
Interest paid			(589,332)	(440,945)
Dividends received			389,275	271,380
Income taxes paid			(247,096)	(122,084)
Net cash provided by operating activities		₩	3,075,641	2,125,262

(continued)

Interim condensed consolidated statements of cash flows, continued for each of the six-month periods ended June 30, 2024 and 2023 (Unaudited)

		For the six-month	•
(in millions of Won)	Notes	June 30, 2024	June 30, 2023
•		(unaudited)	(unaudited)
Cash flows from investing activities			
Acquisitions of short-term financial instruments	₩	(8,489,559)	(34,134,800)
Proceeds from disposal of short-term financial instruments		9,700,332	32,036,199
Increase in loans		(186,203)	(362,714)
Collection of loans		217,194	445,266
Acquisitions of securities		(1,024,195)	(220,744)
Proceeds from disposal of securities		561,249	111,830
Acquisitions of long-term financial instruments		(3,923)	(3,059)
Acquisitions of investment			
in associates and joint ventures		(163,654)	(84,384)
Proceeds from disposal of			
investment in associates and joint ventures		12,614	3,768
Acquisitions of investment property		(3,468)	(55,873)
Proceeds from disposals of investment property		326	496
Acquisitions of property, plant and equipment		(3,800,274)	(2,967,040)
Proceeds from disposal of property, plant and equipment		14,587	(6,029)
Acquisitions of intangible assets		(166,354)	(187,383)
Proceeds from disposal of intangible assets		15,389	25,400
Proceeds from disposal of assets held for sale		-	1,446
Collection of lease receivables		14,959	25,878
Disposal of net assets due to changes in consolidated entities		12,831	
Cash flow from business combination		-	(150,201)
Others, net		(3,597)	5,621
Net cash used in investing activities	_	(3,291,746)	(5,516,323)
Cash flows from financing activities			
Proceeds from borrowings		2,865,904	5,248,527
Repayment of borrowings		(1,803,239)	(2,587,013)
Proceeds from (repayment of) short-term borrowings, net		739,501	(474,083)
Capital contribution from non-controlling interests		139,416	113,817
Payment of cash dividends		(462,624)	(426,895)
Repayment of hybrid bonds		<u>-</u>	(200,000)
Payment of interest of hybrid bonds		-	(8,204)
Repayment of lease liabilities		(92,954)	(101,696)
Others, net	_	87,137	72,814
Net cash provided by financing activities	<u>-</u>	1,473,141	1,637,267
Effect of exchange rate fluctuation on cash held	_	106,504	50,652
Net increase(decrease) in cash and cash equivalents		1,363,540	(1,703,142)
Cash and cash equivalents at beginning of the period	_	6,670,879	8,053,282
Cash and cash equivalents at end of the period	₩_	8,034,419	6,350,140

The accompanying notes are an integral part of the interim condensed consolidated financial statements.

1. General Information

General information about POSCO HOLDINGS INC. (the "Company"), the controlling company, and its subsidiaries in the scope of consolidation, such as 54 domestic subsidiaries including POSCO INC. and 138 foreign subsidiaries including POSCO America Corporation, and 121 associates and joint ventures (collectively referred to as the "Group") in accordance with KIFRS 1110 is as follows:

(a) The controlling company

POSCO HOLDINGS INC., the controlling company, was established on April 1, 1968, under the Commercial Code of the Republic of Korea. The shares of the Company have been listed on the Korea Exchange since June 10, 1988. The Company operates an investment business that controls and manages subsidiaries, etc. through ownership of their shares.

On March 2, 2022, the Company established a new subsidiary, POSCO, by a vertical spinoff of its steel business (which is wholly owned by the surviving company) on March 1, 2022, and changed the name of the surviving company to POSCO HOLDINGS INC.

As of June 30, 2024, the shares of POSCO HOLDINGS INC. are listed on the Korea Exchange, while its ADRs are listed on the New York Stock Exchanges.

(b) Consolidated subsidiaries acquired or newly established during the six-month period ended June 30, 2024 are as follows:

Company	Date of inclusion	Ownership (%)	Reason
POSCO CNGR Nickel Solution	January 2024	60.00	New establishment
POSCO CVC Scale-Up Fund	May 2024	60.00	New establishment

(c) A consolidated subsidiary over which Company has lost control during the six-month period ended June 30, 2024 is as follows:

Company	Date of exclusion	Reason
POSCO INTERNATIONAL POWER (PNGLAE) LTD.	June 2024	Divestiture

2. Basis of Preparation

Statement of compliance

The interim condensed consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("KIFRS") 1034 *Interim Financial Reporting*, as prescribed in *the Act on External Audit of Stock Companies* of the Republic of Korea. The accompanying interim condensed consolidated financial statements have been translated into English from the Korean language financial statements. In the event of any differences in interpreting the financial statements or the independent auditor's review report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail.

The interim condensed consolidated financial statements do not include all the information and disclosures required in the annual financial statements and should be read in conjunction with the Group's annual financial statements as of December 31, 2023. Selected explanatory notes are included to explain events and transactions that are significant to an understanding of the changes in financial position and performance of the Group incurred after December 31, 2023. These interim condensed consolidated financial statements do not include all of the disclosures required for full annual financial statements.

Use of estimates and judgments

(a) Judgments, assumptions and estimation uncertainties

The preparation of the interim condensed consolidated financial statements in conformity with KIFRS 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.

The significant judgments made by management in applying the Group's accounting policies and the key sources of estimation uncertainty were the same as those described in the annual financial statements as of and for the year ended December 31, 2023 except for the matters mentioned below.

2. Basis of Preparation (cont'd)

(b) Measurement of fair value

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

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

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

When measuring the fair value of an asset or a liability, the Group 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 liabilities, either directly or indirectly.
- Level 3 inputs for the assets or liabilities 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 Group recognizes transfers between levels of the fair value hierarchy at the end of the reporting period during which the change has occurred.

3. Summary of Material Accounting Policy Information

Except for the items described in KIFRS 1034 *Interim Financial Reporting* and below, the accounting policies applied by the Group in these interim condensed consolidated financial statements are the same as those applied to the consolidated financial statements as of and for the year ended December 31, 2023.

(a) Supplier Finance Arrangements - Amendments to KIFRS 1007 and KIFRS 1107

The amendments to KIFRS 1007 *Statement of Cash Flows* and KIFRS 1107 *Financial Instruments: Disclosures* clarify the characteristics of supplier finance arrangements and require additional disclosure of such arrangements. The disclosure requirements in the amendments are intended to assist users of financial statements in understanding the effects of supplier finance arrangements on an entity's liabilities, cash flows and exposure to liquidity risk. The transition rules clarify that an entity is not required to provide the disclosures in any interim periods in the year of initial application of the amendments. Thus, the amendments had no impact on the Group's interim condensed consolidated financial statements.

(b) Amendments to KIFRS 1116: Lease Liability in a Sale and Leaseback

The amendments to KIFRS 1116 specify the requirements that a seller-lessee uses in measuring the lease liability arising in a sale and leaseback transaction, to ensure the seller-lessee does not recognize any amount of the gain or loss that relates to the right of use it retains. The amendments had no impact on the Group's interim condensed consolidated financial statements.

(c) Amendments to KIFRS 1001: Classification of Liabilities as Current or Non-current

The amendments to paragraphs 69 to 76 of KIFRS 1001 specify the requirements for classifying liabilities as current or non-current.

The amendments clarify:

- what is meant by a right to defer settlement;
- that a right to defer must exist at the end of the reporting period;
- that classification is unaffected by the likelihood that an entity will exercise its deferral right; and
- that only if an embedded derivative in a convertible liability is itself an equity instrument would the terms of a liability not impact its classification.

In addition, a requirement has been introduced whereby an entity must disclose when a liability arising from a loan agreement is classified as non-current and the entity's right to defer settlement is contingent on compliance with future covenants within twelve months. The amendments had no impact on the Group's interim condensed consolidated financial statements.

4. Trade Accounts and Notes Receivable

Trade accounts and notes receivable as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2024	December 31, 2023
Current			
Trade accounts and notes receivable	₩	10,122,803	9,382,640
Due from customers for contract work		1,565,262	1,916,238
Less: Allowance for doubtful accounts		(282,837)	(283,575)
	₩	11,405,228	11,015,303
Non-current			
Trade accounts and notes receivable	₩	79,607	89,839
Less: Allowance for doubtful accounts		(48,047)	(47,323)
	₩	31,560	42,516

The Group discounted accounts receivable in accordance with accounts receivable factoring agreements with financial institutions for the six-month period ended June 30, 2024 and the year ended December 31, 2023. This transaction is a transaction with the right to appeal because the Group is obligated to pay the amount to the bank, etc. if the trade receivables are not recovered at maturity, and the transaction is accounted for as secured borrowing. As of June 30, 2024 and December 31, 2023, the book value of the accounts receivable from the transaction is \text{\text{W}73,597} million and \text{\text{\text{W}132,942} million, respectively, and the amount is included in the short-term borrowings.}

5. Other Receivables

Other receivables as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2024	December 31, 2023
Current			
Short-term Loans	₩	357,083	223,011
Other accounts receivable		1,452,395	1,433,423
Accrued income(*1)		326,982	237,154
Deposits		108,592	125,854
Others		21,875	15,349
Lease receivables		23,101	23,948
Less: Allowance for doubtful accounts		(104,538)	(111,210)
	₩	2,185,490	1,947,529
Non-current			
Long-term Loans(*1)	₩	1,337,347	1,204,645
Other accounts receivable		175,013	186,492
Accrued income		188,352	184,739
Deposits		253,017	308,185
Lease receivables		90,766	78,994
Less: Allowance for doubtful accounts		(547,190)	(510,610)
	₩	1,497,305	1,452,445

^(*1) The Group recognized an allowance for doubtful accounts of \(\psi 258,332\) million for all of the other receivables from FQM Australia Holdings Pty Ltd., an associate, due to low possibility of collecting these receivables during the year ended December 31, 2023.

6. Other Financial Assets

Other financial assets as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2024	December 31, 2023
Current			
Derivatives assets	₩	296,369	166,873
Debt securities		915,338	295,619
Deposit instruments(*1)		5,692,685	4,400,267
Short-term financial instruments(*1)		4,268,862	6,540,407
		11,173,254	11,403,166
Non-current			
Derivatives assets		334,597	134,269
Equity securities(*2)		1,754,673	1,793,531
Debt securities		92,910	87,778
Other securities(*2)		736,398	669,687
Deposit instruments(*1)		25,344	23,060
	₩	2,943,922	2,708,325

- (*1) As of June 30, 2024 and December 31, 2023, financial instruments amounting to W122,396 million and W101,888 million, respectively, are restricted in use for financial arrangements, pledge and others.
- (*2) As of June 30, 2024 and December 31, 2023, ₩189,866 million and ₩181,617 million of equity and other securities, respectively, have been provided as collateral for borrowings, construction projects and others.

7. Inventories

Inventories as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2024	December 31, 2023
Finished goods	₩	2,521,695	2,615,009
Merchandise		1,050,790	1,049,467
Semi-finished goods		2,603,180	3,039,516
Raw materials		3,718,759	3,237,691
Fuel and materials		1,026,943	921,742
Construction inventories		244,058	256,558
Materials-in-transit		2,501,319	2,965,306
Others		88,241	87,802
		13,754,985	14,173,091
Less: Allowance for inventories valuation(*1)		(269,403)	(347,577)
	₩	13,485,582	13,825,514

(*1) For the six-month period ended June 30, 2024 and the year ended December 31, 2023, the reversed inventory valuation losses are \text{\text{\text{W}}84,809} million and \text{\text{\text{W}}133,548} million, respectively.

8. Assets Held for Sale

Details of assets held for sale as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2024	December 31, 2023 (*1)
Asset			
Account receivables and other receivables	₩	-	728
Inventories		-	39,054
Other financial assets		-	119,881
Property, plant and equipment		7,917	149,612
Intangible assets		-	97,372
Others		-	298
	₩	7,917	406,945
Liability			
Other payables	₩	-	22,180
Provisions		-	119,710
	₩	-	141,890

(*1) POSCO Canada Ltd., a subsidiary of the Group, decided to invest in kind in the assets and liabilities of Greenhills Mine and the shares of Elkview Mine Limited Partnership, which were respectively accounted for as investment stock in joint ventures and financial assets at fair value through profit or loss, in a partnership to be established by the principal operator and major shareholder, Tech Coal Partnership, during the year ended December 31, 2023, and recognized W401,804 million of assets to be sold and W141,890 million of liabilities to be sold.

9. Investments in Associates and Joint ventures

(a) Details of investments in associates as of June 30, 2024 and December 31, 2023 are as follows:

	December 31, 2023				
Number	Ownership		Acquisition		
of shares	(%)		cost	Book value	Book value
4,507,138	34.00	₩	455,584 W	360,153	323,521
17,308,143	49.10		86,541	15,093	15,040
7,109,230	27.89		35,546	20,522	23,998
1,181,160	29.53		5,906	13,907	13,967
108,038	17.54		14,000	18,774	20,296
6,922,449,455	8.80		6,922	8,046	8,904
				126,497	122,366
			-	562,992	528,092
			-	,	
135,219,000	25.04		132,907	293,636	287,282
-	30.00		164,303	251,852	230,699
284,463,243	25.85		328,509	383,675	346,724
49	49.00		209,664	57,790	60,225
-	22.05		247,077	261,247	253,121
2,400	20.00		135,205	64,379	58,759
648,530,000	40.00		120,072	110,284	105,300
8,708,400	20.00		10,054	17,313	15,632
50	25.00		4,723	9,580	8,642
				214,202	209,118
			-	1,663,958	1,575,502
			₩	2,226,950	2,103,594
	0f shares 4,507,138 17,308,143 7,109,230 1,181,160 108,038 6,922,449,455 135,219,000 284,463,243 49 2,400 648,530,000 8,708,400	Number of shares	Number of shares Ownership (%) 4,507,138 34.00 ₩ 17,308,143 49.10 7,109,230 27.89 1,181,160 29.53 108,038 17.54 6,922,449,455 8.80 135,219,000 25.04 30.00 284,463,243 25.85 49 49.00 - 22.05 2,400 20.00 648,530,000 40.00 8,708,400 20.00	of shares (%) cost 4,507,138 34.00 ₩ 455,584 ₩ 17,308,143 49.10 86,541 7,109,230 27.89 35,546 1,181,160 29.53 5,906 108,038 17.54 14,000 6,922,449,455 8.80 6,922 135,219,000 25.04 132,907 - 30.00 164,303 284,463,243 25.85 328,509 49 49.00 209,664 - 22.05 247,077 2,400 20.00 135,205 648,530,000 40.00 120,072 8,708,400 20.00 10,054 50 25.00 4,723	Number of shares Ownership (%) Acquisition cost Book value 4,507,138 34.00 ₩ 455,584 ₩ 360,153 17,308,143 49.10 86,541 15,093 7,109,230 27.89 35,546 20,522 1,181,160 29.53 5,906 13,907 108,038 17.54 14,000 18,774 6,922,449,455 8.80 6,922 8,046 126,497 562,992 135,219,000 25.04 132,907 293,636 - 30.00 164,303 251,852 284,463,243 25.85 328,509 383,675 49 49.00 209,664 57,790 - 2,400 20.00 135,205 64,379 648,530,000 40.00 120,072 110,284 8,708,400 20.00 10,054 17,313 50 25.00 4,723 9,580 214,202 1,663,958

- (*1) As of June 30, 2024 and December 31, 2023, investments in associates amounting to \text{\$\psi 678,804\$ million and \$\psi 650,116\$ million, respectively, are provided as collateral in relation to the associates' borrowings.
- (*2) As of June 30, 2024, the entities are classified as associates since the Group has significant influence over the investees although the Group's percentage of ownership is less than 20%, considering the structure of the entities' Board of Directors and others.

9. Investments in Associates and Joint ventures (cont'd)

(b) Details of investments in joint ventures as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		December 31, 2023				
-	Number	Ownership		Acquisition	Deeleeslee	Daaloodoo
Company	of shares	(%)		cost	Book value	Book value
[Domestic]						
POSCO MC MATERIALS	11,568,000	60.00	₩	115,680 W	151,438	155,748
SNNC	18,130,000	49.00		90,650	83,926	100,692
Others (6 companies)					7,538	8,323
					242,902	264,763
[Foreign]						
Roy Hill Holdings Pty Ltd(*1)	13,117,972	12.50		1,528,672	1,381,593	1,400,009
POSCO-NPS Niobium LLC	325,050,000	50.00		364,609	451,634	419,192
KOBRASCO	2,010,719,185	50.00		32,950	105,716	99,768
Nickel Mining Company SAS	3,234,698	49.00		157,585	89,029	87,967
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	-	25.00		61,961	124,913	111,001
DMSA/AMSA(*1)	-	3.89		346,880	7,076	16,572
PT NICOLE METAL INDUSTRY(*2)	106,935,294	49.00		412,688	419,447	284,351
HBIS-POSCO Automotive Steel Co.Ltd	-	50.00		235,251	201,222	208,765
Others (7 companies)					21,629	24,282
•					2,802,259	2,651,907
				₩	3,045,161	2,916,670

- (*1) As of June 30, 2024 and December 31, 2023, the investments in joint ventures are provided as collateral in relation to the joint ventures' borrowings.
- (*2) During the year ended December 31, 2023, the Group acquired 49% of shares in PT NICOLE METAL INDUSTRY, for \(\psi_292,780\) million and classified them as investments in joint ventures.

9. Investments in Associates and Joint ventures (cont'd)

- (c) Changes in investments in associates and joint ventures for the six-month period ended June 30, 2024 and the year ended December 31, 2023 are as follows:
 - 1) For the six-month period ended June 30, 2024

(in millions of Won)							
Company		December 31, 2023 Book value	Acquisition	Dividends	Share of profits (losses)	Other increase (decrease)(*1)	June 30, 2024 Book value
[Domestic]							
Samcheok Blue Power Co.,Ltd.	₩	323,521	25,680	(5,424)	16,369	7	360,153
SNNC		100,692	-	-	(16,765)	(1)	83,926
Chun-cheon Energy Co., Ltd		15,040	-	-	(4,710)	4,763	15,093
Pocheon-Hwado Highway Corp.		23,998	-	-	(3,476)	-	20,522
CHUNGJU ENTERPRISE CITY							
DEVELOPMENT Co.,Ltd		13,967	-	-	(60)	-	13,907
DaeSung SnM Co., Ltd		20,296	-	-	(1,522)	-	18,774
PCC Amberstone Private Equity Fund 1		8,904	175	-	(262)	(771)	8,046
POSCO MC MATERIALS		155,748	-	(1,800)	(2,510)	-	151,438
Others (55 companies)		130,689	7,634	(3,384)	979	(1,883)	134,035
	-	792,855	33,489	(10,608)	(11,957)	2,115	805,894
[Foreign]	-	,					
South-East Asia Gas Pipeline Company Ltd.		287,282	-	(35,255)	20,055	21,554	293,636
AES Mong Duong Power Company Limited		230,699	-	(15,431)	17,838	18,746	251,852
9404-5515 Quebec Inc.		346,724	-	(17,764)	18,769	35,946	383,675
AMCI (WA) PTY LTD		60,225	-	-	(16,056)	13,621	57,790
NCR LLC		253,121	4,275	-	(9,653)	13,504	261,247
KOREA LNG LTD.		58,759	-	(10,423)	10,336	5,707	64,379
Nickel Mining Company SAS		87,967	-	-	(2,989)	4,051	89,029
ZHEJIANG HUAYOU-POSCO ESM CO., LTD		105,300	-	-	(599)	5,583	110,284
PT. Wampu Electric Power		15,632	-	-	513	1,168	17,313
POS-SeAH Steel Wire(Nantong) CO., Ltd.		8,642	-	-	248	690	9,580
Roy Hill Holdings Pty Ltd		1,400,009	-	(218,861)	130,232	70,213	1,381,593
POSCO-NPS Niobium LLC		419,192	-	(8,041)	8,061	32,422	451,634
KOBRASCO		99,768	-	(5,761)	17,149	(5,440)	105,716
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.		111,001	-	-	8,113	5,799	124,913
DMSA/AMSA		16,572	-	-	(10,471)	975	7,076
PT NICOLE METAL INDUSTRY		284,351	119,908	-	(501)	15,689	419,447
HBIS-POSCO Automotive Steel Co.Ltd		208,765	-	-	(18,392)	10,849	201,222
Others (41 companies)		233,400	2,343	(15,932)	13,483	2,537	235,831
	-	4,227,409	126,526	(327,468)	186,136	253,614	4,466,217
	₩	5,020,264	160,015	(338,076)	174,179	255,729	5,272,111

(*1) Other increase (decrease) represents the changes in investments in associates and joint ventures due to disposals and change in capital adjustments effect from translations of financial statements of foreign investees and others for the sixmonth period ended June 30, 2024.

9. Investments in Associates and Joint ventures (cont'd)

2) For the year ended December 31, 2023

(in millions of Won)							
		December 31, 2022			Share of	Other increase	December 31, 2023
Company		Book value	Acquisition	Dividends	profits (losses)	(decrease)(*1)	Book value
[Domestic]							
Samcheok Blue Power Co.,Ltd.	₩	352,500	-	(10,020)	(18,802)	(157)	323,521
SNNC		182,414	-	-	(81,803)	81	100,692
QSONE Co.,Ltd.(*2)		86,378	-	-	245	(86,623)	-
Chun-cheon Energy Co., Ltd		9,513	-	-	4,990	537	15,040
Pocheon-Hwado Highway Corp.		27,165	636	_	(3,803)	-	23,998
CHUNGJU ENTERPRISE CITY		•					
DEVELOPMENT Co.,Ltd		14,605	-	-	(638)	-	13,967
DaeSung SnM Co., Ltd		20,469	-	-	75	(248)	20,296
PCC Amberstone Private Equity Fund 1		9,326	-	(622)	562	(362)	8,904
POSCO MC MATERIALS		161,465	-	(9,000)	3,176	107	155,748
Others (55 companies)		160,553	16,439	(4,292)	1,966	(43,977)	130,689
	_	1,024,388	17,075	(23,934)	(94,032)	(130,642)	792,855
[Foreign]	_						
South-East Asia Gas Pipeline Company Ltd.		290,318	-	(59,295)	50,340	5,919	287,282
AES Mong Duong Power Company Limited		209,594	-	(33,839)	38,782	16,162	230,699
9404-5515 Quebec Inc.		331,261	-	(14,251)	16,494	13,220	346,724
FQM Australia Holdings Pty Ltd		98,103	-	-	(111,783)	13,680	-
Eureka Moly LLC		14,574	-	-	(15,020)	446	-
AMCI (WA) PTY LTD		57,830	-	-	(503)	2,898	60,225
NCR LLC		187,372	65,542	-	(6,999)	7,206	253,121
KOREA LNG LTD.		29,124	-	(21,106)	21,060	29,681	58,759
Nickel Mining Company SAS		90,636	-	-	(8,358)	5,689	87,967
ZHEJIANG HUAYOU-POSCO ESM CO., LTD		98,933	15,640	-	(8,435)	(838)	105,300
PT. Wampu Electric Power		16,659	-	(1,624)	1,890	(1,293)	15,632
POS-SeAH Steel Wire(Nantong) Co., Ltd.		8,590	-	-	98	(46)	8,642
Roy Hill Holdings Pty Ltd		1,418,022	-	(367,445)	292,478	56,954	1,400,009
POSCO-NPS Niobium LLC		412,002	-	(35,543)	35,148	7,585	419,192
KOBRASCO		103,044	-	(36,471)	21,795	11,400	99,768
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.		111,219	-	(12,386)	12,669	(501)	111,001
DMSA/AMSA		23,740		-	(7,681)	513	16,572
PT NICOLE METAL INDUSTRY		- 010 100	292,780	-	39	(8,468)	284,351
HBIS-POSCO Automotive Steel Co.Ltd		216,138	-	(EQ 444)	(6,765)	(608)	208,765
Others (37 companies)	_	255,004 3,972,163	373,962	(52,444)	38,461	(7,621) 151,978	233,400
	₩-	4,996,551	373,962	(658,338)	269,678	21,336	5,020,264
	** _	4,220,001	371,037	(000,000)	203,070	۷١,٥٥٥	0,020,204

- (*1) Other increase (decrease) represents the changes in investments in associates and joint ventures due to disposals and change in capital adjustments effect from translations of financial statements of foreign investees and others during the year ended December 31, 2023.
- (*2) During the year ended December 31, 2023, the Company acquired an additional 50% of the shares held by an external shareholder of QSONE Co. Ltd., which was previously classified as an investment in an associate. As a result, the Company gained control of the company and consolidated it.

9. Investments in Associates and Joint ventures (cont'd)

- (d) The summarized financial information of associates and joint ventures as of and for the six-month period ended June 30, 2024 and the year ended December 31, 2023 is as follows:
 - 1) June 30, 2024

(in millions of Won)

(IN MIIIIONS OF VVON)				Facilities		Mat in a a ma
Company		Assets	Liabilities	Equity (deficit)	Sales	Net income (loss)
[Domestic]						
Samcheok Blue Power Co.,Ltd.	₩	4,525,754	3,867,725	658,029	228,250	56,338
SNNC		690,831	501,171	189,660	334,563	(34,617)
Chun-cheon Energy Co., Ltd		564,213	442,382	121,831	216,072	3,726
Pocheon-Hwado Highway Corp.		706,904	594,512	112,392	8,916	(8,636)
CHUNGJU ENTERPRISE CITY						
DEVELOPMENT Co.,Ltd		19,647	2,853	16,794	-	(203)
DaeSung SnM Co., Ltd		172,924	97,278	75,646	36,291	(8,675)
PCC Amberstone Private Equity Fund 1		91,734	268	91,466	6	(2,975)
POSCO MC MATERIALS		386,342	132,665	253,677	105,789	(3,895)
[Foreign]						
South-East Asia Gas Pipeline Company Ltd.		1,865,366	692,708	1,172,658	192,933	80,086
AES Mong Duong Power Company Limited		1,671,113	877,232	793,881	226,681	59,459
9404-5515 Quebec Inc.		1,546,752	-	1,546,752	-	72,592
FQM Australia Holdings Pty Ltd		73,426	1,409,327	(1,335,901)	101,457	(349,364)
KOREA LNG LTD.		322,005	109	321,896	52,630	51,679
Nickel Mining Company SAS		519,520	278,539	240,981	99,661	(16,876)
ZHEJIANG HUAYOU-POSCO ESM CO., LTD		307,081	30,866	276,215	43,970	(1,498)
PT. Wampu Electric Power		210,819	127,257	83,562	9,063	2,564
POS-SeAH Steel Wire(Nantong) Co., Ltd.		87,311	50,603	36,708	60,327	1,052
Roy Hill Holdings Pty Ltd		10,807,080	2,954,023	7,853,057	3,886,179	1,232,923
POSCO-NPS Niobium LLC		903,065	-	903,065	-	15,910
KOBRASCO		231,616	20,790	210,826	52,166	33,107
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.		862,062	389,276	472,786	868,209	32,451
DMSA/AMSA		3,189,568	3,007,766	181,802	363,223	(269,218)
HBIS-POSCO Automotive Steel Co.Ltd		897,574	487,321	410,253	251,475	(39,347)
PT NICOLE METAL INDUSTRY		588,197	5,764	582,433	-	(1,022)

9. Investments in Associates and Joint ventures (cont'd)

2) December 31, 2023

(in millions of Won)

				Equity		Net income
Company		Assets	Liabilities	(deficit)	Sales	(loss)
[Domestic]						
Samcheok Blue Power Co.,Ltd.	₩	4,228,568	3,669,074	559,494	14,002	(28,880)
SNNC		612,992	388,715	224,277	766,011	(168,553)
Chun-cheon Energy Co., Ltd		571,495	453,390	118,105	502,879	10,453
Pocheon-Hwado Highway Corp.		583,935	462,900	121,035	-	(1,824)
CHUNGJU ENTERPRISE CITY						
DEVELOPMENT Co.,Ltd		19,995	2,998	16,997	5,595	(2,160)
DaeSung SnM Co., Ltd		178,251	93,930	84,321	108,660	430
PCC Amberstone Private Equity Fund 1		105,145	3,923	101,222	12,134	6,391
POSCO MC MATERIALS		431,090	170,518	260,572	194,238	2,998
[Foreign]						
South-East Asia Gas Pipeline Company Ltd.		1,758,765	611,484	1,147,281	434,358	201,031
AES Mong Duong Power Company Limited		1,612,793	889,424	723,369	449,807	129,274
9404-5515 Quebec Inc.		1,430,295	-	1,430,295	-	63,809
FQM Australia Holdings Pty Ltd		180,931	1,219,922	(1,038,991)	453,626	(1,480,586)
KOREA LNG LTD.		94,661	136	94,525	108,081	105,300
Nickel Mining Company SAS		520,209	272,567	247,642	296,130	(26,786)
ZHEJIANG HUAYOU-POSCO ESM CO., LTD		297,683	33,927	263,756	34,372	(21,081)
PT. Wampu Electric Power		206,942	131,822	75,120	20,166	9,452
POS-SeAH Steel Wire(Nantong) Co., Ltd.		82,568	48,727	33,841	117,208	522
Roy Hill Holdings Pty Ltd		10,929,518	3,007,919	7,921,599	8,146,546	2,826,424
POSCO-NPS Niobium LLC		838,180	-	838,180	-	64,687
KOBRASCO		224,406	25,475	198,931	63,338	43,591
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.		659,704	242,566	417,138	1,647,395	50,675
DMSA/AMSA		3,058,209	2,632,239	425,970	1,106,369	(197,482)
HBIS-POSCO Automotive Steel Co.Ltd		826,886	398,751	428,135	340,341	(12,584)
PT NICOLE METAL INDUSTRY		389,077	2,237	386,840	-	79

10. Joint Operations

Details of significant joint operations that the Group is participating in as a party to a joint arrangement as of June 30, 2024 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
Mt. Thorley J/V	Mine development	20.00	Australia
POSMAC J/V	Mine development	20.00	Australia

11. Investment Property

Changes in the carrying amount of investment property for the six-month period ended June 30, 2024 and the year ended December 31, 2023 are as follows:

(a) For the six-month period ended June 30, 2024

						Impairment		
(in millions of Won)	_	Beginning	Acquisitions	Disposals	Depreciation	loss	Others(*1)	Ending
Land	₩	787,304	1,710	-	-	(215)	28,085	816,884
Buildings		655,786	1,758	(273)	(13,649)	(456)	27,420	670,586
Structures		1,873	-	-	(456)	-	388	1,805
Right-of-use assets		171,331	-	(53)	(3,504)	-	4,803	172,577
	₩	1,616,294	3,468	(326)	(17,609)	(671)	60,696	1,661,852

(*1) Includes reclassification resulting from changes in purpose of use, and adjusted foreign currency translation difference and others.

(b) For the year ended December 31, 2023

(in millions of Won)		Daninnina	A amulaitiana	Business	Dianagala	Dannasiation	O4h ara/*1)	Fadias
	-	Beginning	Acquisitions	Combination(*2)	Disposals	Depreciation	Others(*1)	Ending
Land	₩	308,523	54,891	473,301	(60)	-	(49,351)	787,304
Buildings		593,505	1,006	83,739	(303)	(28,902)	6,741	655,786
Structures		1,356	-	-	-	(1,049)	1,566	1,873
Right-of-use assets		170,647	216	-	(78)	(5,635)	6,181	171,331
	₩	1,074,031	56,113	557,040	(441)	(35,586)	(34,863)	1,616,294

^(*1) Includes reclassification resulting from changes in purpose of use, and adjusted foreign currency translation difference and others.

^(*2) Represents increases in investment property due to business combination upon incorporation of QSONE Co.,Ltd. into a subsidiary during the year ended December 31, 2023.

12. Property, Plant and Equipment

- (a) Changes in the carrying amount of property, plant and equipment for the six-month period ended June 30, 2024 and the year ended December 31, 2023 are as follows:
 - 1) For the six-month period ended June 30, 2024

						Impairment		
(in millions of Won)	_	Beginning	Acquisitions	Disposals	Depreciation	loss	Others(*1)	Ending
Land	₩	3,290,244	472	(5,950)	-	-	24,605	3,309,371
Buildings		4,427,632	7,348	(1,779)	(167,181)	(250)	297,599	4,563,369
Structures		3,081,524	3,770	(2,014)	(141,792)	(2,676)	516,455	3,455,267
Machinery and equipment		16,539,192	84,549	(21,890)	(1,200,120)	(43,097)	2,298,513	17,657,147
Vehicles		79,595	7,514	(788)	(16,193)	-	11,950	82,078
Tools		128,865	13,026	(399)	(27,273)	-	13,056	127,275
Furniture and fixtures		189,887	13,533	(644)	(32,848)	-	16,334	186,262
Right-of-use assets		998,305	71,107	(4,265)	(80,307)	-	11,932	996,772
Bearer plants		137,331	-	-	(4,740)	-	1,818	134,409
Construction-in-progress		6,333,673	4,065,170	(3,337)	-	(17,099)	(2,744,124)	7,634,283
	₩	35,206,248	4,266,489	(41,066)	(1,670,454)	(63,122)	448,138	38,146,233

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

2) For the year ended December 31, 2023

(in millions of Won)				Business			Impairment		
	_	Beginning	Acquisitions	Combination(*1)	Disposals	Depreciation	loss(*2,3)	Others(*4)	Ending
Land	₩	3,103,165	83,489	32,565	(7,502)		(5,471)	83,998	3,290,244
Buildings		4,174,894	53,344	5,770	(14,619)	(326,280)	(28,614)	563,137	4,427,632
Structures		3,162,927	16,498	3,651	(6,915)	(261,970)	(28,483)	195,816	3,081,524
Machinery and equipment		16,422,830	211,181	-	(63,195)	(2,401,947)	(202,885)	2,573,208	16,539,192
Vehicles		52,131	34,004	-	(782)	(26,322)	-	20,564	79,595
Tools		90,961	40,170	-	(607)	(52,444)	(77)	50,862	128,865
Furniture and fixtures		173,345	36,975	655	(1,516)	(61,947)	(63)	42,438	189,887
Right-of-use assets		921,198	243,433	-	(15,095)	(170,386)	-	19,155	998,305
Bearer plants		141,720	-	-	-	(9,579)	-	5,190	137,331
Construction-in-progress		3,538,025	6,388,837	-	(2,269)	-	(8,420)	(3,582,500)	6,333,673
	₩	31,781,196	7,107,931	42,641	(112,500)	(3,310,875)	(274,013)	(28,132)	35,206,248

- (*1) Represents increases in property, plant and equipment upon reclassification of QSONE Co.,Ltd., which was previously an associate, into a subsidiary by acquiring additional shares during the year ended December 31, 2023.
- (*2) The Group estimated the recoverable amount after calculating the net fair value of individual assets whose operation was suspended due to operation plan changes, such as lithium production facilities in Gwangyang and Argentina, and recognized an impairment loss of W196,207 million for property, plant and equipment whose recoverable amount was less than the book value during the year ended December 31, 2023.
- (*3) The Group estimated the recoverable amount after calculating the value in use of the hydrogen peroxide manufacturing facility in Gwangyang, which had impairment indications due to changes in raw material prices and changes in production plans during the year ended December 31, 2023, and recognized an impairment loss of \(\forall \) 46,535 million for property, plant and equipment whose recoverable amount was less than the book value.
- (*4) Represents assets transferred from construction-in-progress to intangible assets and other property, plant and equipment, reclassifications resulting from change in purpose of use, adjustments of foreign currency translation differences and others.

12. Property, Plant and Equipment (cont'd)

- (b) Changes in the carrying amount of right-of-use assets presented as investment property and property, plant and equipment for the six-month period ended June 30, 2024 and the year ended December 31, 2023 are as follows:
 - 1) For the six-month period ended June 30, 2024

		,		1-11		,
Buildings and structures		151,366	41,297	(23,204)	(8,277)	161,182
Machinery and equipment		355,604	19,787	(23,655)	10,227	361,963
Vehicles		48,228	7,214	(10,109)	708	46,041
Ships		220,754	-	(12,029)	-	208,725
Others		29,895	1,799	(6,627)	(8,092)	16,975
	₩	1,169,636	71,107	(83,812)	12,418	1,169,349

2) For the year ended December 31, 2023

Luliu	v v	000,107	10,710	(10,002)	/∪⊤	000,700
Buildings and structures		163,648	49,929	(52,697)	(9,514)	151,366
Machinery and equipment		319,021	73,761	(55,481)	18,303	355,604
Vehicles		18,652	38,410	(16,456)	7,622	48,228
Ships		215,496	28,178	(22,920)	-	220,754
Others		6,862	42,901	(12,885)	(6,983)	29,895
	₩	1,091,846	243,649	(176,021)	10,162	1,169,636

(c) The amounts recognized in profit or loss related to leases for each of the three-month and the six-month periods ended June 30, 2024 and 2023 are as follows:

(in millions of Won)		2024	2023	2024	2023
Interest on lease liabilities	₩	11,966	10,331	24,312	19,638
Expenses related to short-term leases		9,509	17,484	28,444	24,965
Expenses related to leases of low-value assets		6,215	4,115	12,871	9,468
	₩	27,690	31,930	65,627	54,071

13. Goodwill and Other Intangible Assets

Changes in the carrying amount of goodwill and other intangible assets for the six-month period ended June 30, 2024 and the year ended December 31, 2023 are as follows:

(a) For the six-month period ended June 30, 2024

(in millions of Won)	_	Beginning	Acquisitions	Business Combination	Disposals	Amortization	Impairment Ioss	Others(*2)	Ending
Goodwill	₩	403,172	-	-	-	-	-	(2,631)	400,541
Intellectual property rights		3,029,651	152,414	-	-	(140,414)	-	101,329	3,142,980
Membership(*1)		138,184	948	-	(2,571)	(94)	(11)	230	136,686
Development expense		126,818	1,935	-	(8,833)	(37,445)	-	14,752	97,227
Port facilities usage rights		182,411	=	-	-	(7,400)	-	-	175,011
Exploratation and evaluation assets		163,446	15,870	-	-	-	-	9,069	188,385
Development assets		10,235	471	-	-	-	-	522	11,228
Customer relationships		196,895	-	-	-	(22,239)	-	(6,188)	168,468
Other intangible assets		463,972	44,962	(312)	(102,769)	(28,969)	-	(2,338)	374,546
	₩	4,714,784	216,600	(312)	(114,173)	(236,561)	(11)	114,745	4,695,072

- (*1) Estimated 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.

(b) For the year ended December 31, 2023

(in millions of Won)	_	Beginning	Acquisitions	Disposals	Amortization	Impairment loss(*2)	Others(*3)	Ending
Goodwill	₩	442,487	-	-	-	(36,093)	(3,222)	403,172
Intellectual property rights		3,136,072	208,874	(5)	(321,752)	(89,986)	96,448	3,029,651
Membership(*1)		132,942	7,360	(1,920)	(170)	11	(39)	138,184
Development expense		116,171	13,130	(97)	(73,319)	-	70,933	126,818
Port facilities usage rights		197,211	-	-	(14,800)	-	-	182,411
Exploratation and evaluation assets		100,991	67,000	-	-	(1,204)	(3,341)	163,446
Development assets		78,970	27,831	-	-	-	(96,566)	10,235
Customer relationships		241,311	· -	-	(44,478)	-	62	196,895
Other intangible assets		392,296	139,100	(625)	(43,674)	(2,055)	(21,070)	463,972
-	₩	4,838,451	463,295	(2,647)	(498,193)	(129,327)	43,205	4,714,784

- (*1) Estimated useful life of membership is indefinite.
- (*2) During the year ended December 31, 2023, POSCO Canada Ltd., a subsidiary, decided to make an investment in kind by investing Greenhills Mine, which had been recognized as a joint operation, to a new partnership established by Teck Coal Partnership, the main operator. POSCO Canada Ltd. estimated the recoverable amount considering the fair value and acquired shares of the new partnership, and recognized an impairment loss of \text{\textsuperstandard} 88,518 million since recoverable amounts are less than their carrying amounts.
- (*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.

14. Other Assets

Other assets as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2024	December 31, 2023
Current			
Advance payments	₩	467,213	593,300
Prepaid expenses		339,425	226,960
Firm commitment asset		7,947	3,418
Others		11,810	17,306
		826,395	840,984
Non-current			
Long-term advance payments		31,002	46,989
Long-term prepaid expenses		25,340	30,232
Others		72,055	95,974
	₩	128,397	173,195

15. Borrowings

(a) Short-term borrowings and current portion of long-term borrowings and others as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)	Lenders	Issuance date	Maturity date	Interest rate (%)		June 30, 2024	December 31, 2023
Short-term borrowings							
Bank overdrafts	JP Morgan and others	July, 2023~ June, 2024	July, 2024~ June, 2025	3.65 ~ 7.60	₩	48,416	69,160
Short-term borrowings	HSBC and others	July, 2023~ June, 2024	July, 2024~ June, 2025	0.10 ~ 58.85		5,986,046	4,890,120
						6,034,462	4,959,280
Current portion of long-term liabilities							
Current portion of long-term borrowings	Export-Import Bank of Korea and others	September, 2001~ June, 2024	July, 2024~ June, 2025	0.19 ~ 9.30		755,040	990,088
Current portion of debentures	KB Securities co.,Ltd. and others	April, 2019~ May, 2023	July, 2024~ June, 2025	1.64 ~ 5.26		3,860,488	3,255,375
Less: Current portion of discount on debentures issued						(2,165)	(2,217)
Current portion of exchangable bonds(*1)	Foreign currency exchangable bonds	September, 2021	September, 2026			1,587,018	1,756,691
						6,200,381	5,999,937
					₩	12,234,843	10,959,217

(*1) The issuance conditions of the exchangeable bonds issued by the Group are as follows. As of December 31, 2023, exchangeable bonds are reclassified as current liabilities because the bondholders' put option for redemption has become exercisable within 12 months.

12 1110111110.	
	Foreign currency exchangeable bonds
Type of bond	Exchangeable bonds
Aggregate principal amount	EUR 1,065,900,000
Interest rate	- Coupon rate : -
	- Yield to maturity : (0.78%)
Maturity date	September 1, 2026
Redemption	- Redemption at maturity : Outstanding bond principal, which is not repaid early or which call option
	is not excercised on, is repaid at maturity as a lump sum
	- Prepayment : The issuer has call option and the bondholders have put option
Exchange rate	100%
Exchange price (Won/share)	443,680(*)
Underlying shares	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 paid during the six-month period ended June 30, 2024.

The Group 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.

15. Borrowings (cont'd)

(b) Long-term borrowings, excluding current portion and others, as of June 30, 2024 and December 31, 2023 are as follows:

Lenders	Issuance date	Maturity date	Interest rate (%)	_	June 30, 2024	December 31, 2023
Export-Import Bank of Korea and others	September, 2001~ March, 2024	Junly, 2025~ March, 2040	1.38 ~ 9.04	₩	5,348,630	4,590,541
					(11,554)	(9,414)
KB Securities co.,Ltd. and others	July, 2015~ June, 2024	July, 2025~ January, 2033	1.68 ~ 6.82		11,140,324	10,478,394
	,	,, ,,			(52,537)	(48,359)
				₩	16,424,863	15,011,162
	Export-Import Bank of Korea and others	Export-Import Bank of September, 2001~ Korea and others March, 2024 KB Securities co.,Ltd. and July, 2015~	Export-Import Bank of September, 2001~ Junly, 2025~ Korea and others March, 2024 March, 2040 KB Securities co.,Ltd. and July, 2015~ July, 2025~	Export-Import Bank of Korea and others September, 2001 ~ Junly, 2025 ~ March, 2040 1.38 ~ 9.04 KB Securities co.,Ltd. and July, 2015 ~ July, 2025 ~ 1.68 ~ 6.82	Export-Import Bank of Korea and others September, 2001~ March, 2024 March, 2040 1.38 ~ 9.04 W KB Securities co.,Ltd. and others Juny, 2015~ Juny, 2025~ June, 2024 January, 2033 1.68 ~ 6.82	Export-Import Bank of Korea and others March, 2024 March, 2040 1.38 ~ 9.04 W 5,348,630 (11,554) KB Securities co.,Ltd. and others June, 2024 January, 2033 1.68 ~ 6.82 11,140,324 (52,537)

(c) Assets pledged as collateral with regard to the borrowings as of June 30, 2024 are as follows:

(in millions of Won)	Lenders		Book value	Pledged amount	
Property, plant and equipment and Investment property	Korea Development Bank and others	₩	1,914,750	3,385,677	
Trade accounts and notes receivable	Korea Development Bank and others		73,597	73,597	
Financial instruments	Shinhan Bank and others		73,724	73,582	
		₩	2,062,071	3,532,856	

16. Other Payables

Other payables as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2024	December 31, 2023
Current			
Accounts payable	₩	1,222,522	1,174,097
Accrued expenses		1,343,888	1,046,891
Dividend payable		3,237	3,261
Lease liabilities		163,596	163,952
Withholdings		356,437	349,277
	₩	3,089,680	2,737,478
Non-current	_		
Accounts payable	₩	7,899	14,143
Accrued expenses		8,267	8,073
Lease liabilities		762,464	760,368
Long-term withholdings		81,506	90,981
	₩	860,136	873,565

17. Other Financial Liabilities

Other financial liabilities as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2024	December 31, 2023	
Current				
Derivative liabilities	₩	64,766	38,631	
Financial guarantee liabilities		5,732	5,114	
Others(*1)		170,864	119,881	
	₩	241,362	163,626	
Non-current	-			
Derivative liabilities	₩	14,793	81,291	
Financial guarantee liabilities		8,825	7,858	
Others		64,634	64,633	
	₩	88,252	153,782	

^(*1) The Group recognized other financial liabilities in connection with the put option agreement which POSCO FUTURE MATERIALS CANADA INC. (formerly, POSCO CHEMICAL CANADA INC.), a subsidiary, entered into with GM Battery Raw Materials Corporation.

18. Provisions

(a) Provisions as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 3	0, 2024	December 31, 2023		
	_	Current	Non-current	Current	Non-current	
Provision for bonus payments	₩	123,682	39,962	146,277	38,114	
Provision for construction warranties		54,369	137,050	50,222	146,536	
Provision for legal contingencies and claims(*1)		25,520	51,982	20,893	52,169	
Provision for the restoration(*2)		11,514	179,513	14,567	161,253	
Others(*3,4,5)		248,899	73,504	187,785	69,937	
Y	₩ _	463,984	482,011	419,744	468,009	

- (*1) The Group recognized probable outflow of resources amounting to \$\fomallow\$55,580 million and \$\fomallow\$45,712 million as provisions for legal contingencies and asserted claim in relation to lawsuits against the Group as of June 30, 2024 and December 31, 2023, respectively.
- (*2) Due to contamination of lands near the Group's magnesium smelting plant located in Gangneung city and others, the Group recognized present values of estimated costs for recovery amounting to \(\frac{\psi}{14}\),753 million as provisions for restoration as of June 30, 2024. In order to determine the estimated costs, the Group has assumed that it would use all of technologies and materials available for now to recover the land. In addition, the Group has applied a discount rate of 3.55% \(\pi 3.58\)% to measure present value of these costs.
- (*3) As of June 30, 2024 and December 31, 2023, POSCO INTERNATIONAL Corporation and Korea Fuel Cell, recognized \(\pi \)22,366 million and \(\pi \)23,224 million of provisions for warranties, respectively, for the service contract on fuel cell based on its estimate of probable outflow of resources.
- (*4) As of June 30, 2024 and December 31, 2023, the Group has recognized emission liabilities amounting to \text{\$\psi_6,323\$ million and \$\psi_9,065\$ million, respectively, for expected greenhouse gas emissions exceeding the quantity of free quota emission rights.
- (*5) According to the *Act on the promotion of the development, use and diffusion of new and renewable energy*, POSCO INTERNATIONAL Corporation is obliged to supply a certain amount of power generated by new and renewable energy sources. In accordance with the Act, POSCO INTERNATIONAL Corporation estimated the cost required to fulfill its obligations, such as insufficient supply of power using new and renewable energy to be borne, and as of June 30, 2024 and December 31, 2023, the Group recognized \text{W}124,092 million and \text{W}64,166 million respectively, as provision.

18. Provisions (cont'd)

- (b) Changes in provisions for the six-month period ended June 30, 2024 and the year ended December 31, 2023 are as follows:
 - 1) For the six-month period ended June 30, 2024

(in millions of Won)	_	Beginning	Increase	Utilization	Reversal	Others(*1)	Ending
Provision for bonus payments	₩	184,391	102,418	(118,977)	(4,965)	777	163,644
Provision for construction warranties		196,758	25,269	(20,292)	(4,294)	(6,022)	191,419
Provision for legal contingencies and claims		73,062	10,129	(1,673)	(4,665)	649	77,502
Provision for the restoration		175,820	11,535	(1,289)	(6,428)	11,389	191,027
Others		257,722	110,550	(30,652)	(51,010)	35,793	322,403
	₩	887,753	259,901	(172,883)	(71,362)	42,586	945,995

^(*1) Includes adjusted foreign currency translation differences and others.

2) For the year ended December 31, 2023

(in millions of Won)	_	Beginning	Increase	Utilization	Reversal	Others(*1)	Ending
Provision for bonus payments	₩	169,432	181,221	(158,529)	(6,063)	(1,670)	184,391
Provision for construction warranties		205,974	42,653	(49,117)	(8,350)	5,598	196,758
Provision for legal contingencies and claims		106,341	16,327	(48,144)	(3,599)	2,137	73,062
Provision for the restoration		191,146	104,227	(9,887)	(80)	(109,586)	175,820
Others		423,013	189,227	(255,001)	(112,909)	13,392	257,722
	₩	1,095,906	533,655	(520,678)	(131,001)	(90,129)	887,753

^(*1) Includes transfer to liabilities held for sale and adjusted foreign currency translation differences and others.

19. Employee Benefits

(a) Defined contribution plans

The expenses related to post-employment benefit plans under defined contribution plans for each of the three-month and the six-month periods ended June 30, 2024 and 2023 are as follows:

(in millions of Won)		For the three-mor	nth periods	For the six-month periods		
		ended June 30		ended June 30		
	·	2024	2023	2024	2023	
Expense related to post-employment benefit pla	ans					
under defined contribution plans	₩	18,731	15,758	37,400	33,969	

(b) Defined benefit plans

1) The amounts recognized in relation to net defined benefit assets in the statements of financial position as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)	-	June 30, 2024	December 31, 2023
Present value of funded obligations	₩	2,413,241	2,445,797
Fair value of plan assets(*1)		(2,966,063)	(2,902,714)
Present value of non-funded obligations		138,883	30,912
Net defined benefit liabilities	₩	(413,939)	(426,005)

- (*1) As of June 30, 2024 and December 31, 2023, the Group recognized net defined benefit assets amounting to W484,865 million and W464,758 million, respectively, which represent the excess of each consolidated entity's plan assets over the present value of defined benefit obligations.
- 2) The amounts recognized in the interim condensed consolidated statements of comprehensive income for each of the three-month and the six-month periods ended June 30, 2024 and 2023 are as follows:

		For the three-month periods ended June 30		For the six-mon ended Jur	•
(in millions of Won)	_	2024	2023	2024	2023
Current service costs Net interest costs	₩ _	65,526 (5,011)	54,721 (6,848)	133,348 (10,585)	113,833 (14,623)
	₩_	60,515	47,873	122,763	99,210

20. Other Liabilities

Other liabilities as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2024	December 31, 2023
Current			
Due to customers for contract work	₩	542,634	624,632
Advances received		354,899	304,441
Unearned revenue		67,340	69,062
Withholdings		300,988	297,442
Firm commitment liability		19,977	20,136
Others(*1)		24,356	21,929
	₩	1,310,194	1,337,642
Non-current			
Unearned revenue	₩	4,843	8,889
Others(*1)		100,860	105,583
	₩	105,703	114,472

^(*1) As of June 30, 2024 and December 31, 2023, the Group recognized the assumed liability amounting to \text{\$\psi\$}50,752 million and \text{\$\psi\$}56,325 million, respectively, related to unfavorable terms of a customer contract relative to market-terms upon the acquisition of Senex Energy Limited by Senex Holdings PTY LTD, a subsidiary.

21. Financial Instruments

- (a) Classification and fair value of financial instruments
- 1) The carrying amount and fair values of financial assets and financial liabilities by fair value hierarchy as of June 30, 2024 and December 31, 2023 are as follows:
 - ① June 30, 2024

(in millions of Won)				Fair valu	10	
		Book value	Level 1	Level 2	Level 3	Total
Financial assets	_					
Fair value through profit or loss						
Derivative assets	₩	608,636	-	608,636	-	608,636
Short-term financial instruments		4,268,862	-	4,268,862	-	4,268,862
Equity securities		79,764	48,236	-	31,528	79,764
Debt securities		91,994	-	81,185	10,809	91,994
Other securities		736,398	-	-	736,398	736,398
Derivative hedging instruments(*2)		22,330	-	22,330	-	22,330
Fair value through other comprehensive income						
Equity securities		1,674,909	1,243,836	-	431,073	1,674,909
Financial assets measured at amortized cost(*1)						
Cash and cash equivalents		8,034,419	-	-	-	-
Trade accounts and notes receivable		9,884,286	-	-	-	-
Other receivables		2,990,190	-	-	-	-
Debt securities		916,254	-	-	-	-
Deposit instruments		5,718,029	<u> </u>	<u> </u>		=
	₩	35,026,071	1,292,072	4,981,013	1,209,808	7,482,893
Financial liabilities						
Fair value through profit or loss						
Derivative liabilities	₩	64,427	-	64,427	-	64,427
Borrowings		1,587,018	1,587,018	-	-	1,587,018
Other financial Liabilities		235,498	-	-	235,498	235,498
Derivative hedging instruments(*2)		15,132	-	15,132	-	15,132
Financial liabilities measured at amortized cost(*1)						
Trade accounts and notes payable		5,712,870	-	-	-	-
Borrowings		27,072,688	-	26,721,143	-	26,721,143
Financial guarantee liabilities		14,557	-	=	-	-
Others		3,573,130	-	-	-	-
	₩	38,275,320	1,587,018	26,800,702	235,498	28,623,218

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

21. Financial Instruments (cont'd)

② December 31, 2023

(in millions of Won)				Fair valu	ie	
		Book value	Level 1	Level 2	Level 3	Total
Financial assets	_					
Fair value through profit or loss						
Derivative assets	₩	291,541		291,541		291,541
Short-term financial instruments		6,540,407	-	6,540,407		6,540,407
Equity securities		99,254	61,665	-	37,589	99,254
Debt securities		88,196		75,183	13,013	88,196
Other securities		669,687	-	270	669,417	669,687
Derivative hedging instruments(*2)		9,601		9,601	-	9,601
Fair value through other comprehensive income						
Equity securities		1,694,277	1,539,205		155,072	1,694,277
Financial assets measured at amortized cost(*1)						
Cash and cash equivalents		6,670,879				-
Trade accounts and notes receivable		9,155,853				-
Other receivables		2,750,036				
Debt securities		295,201				-
Deposit instruments		4,423,327	-	-	-	-
	₩	32,688,259	1,600,870	6,917,002	875,091	9,392,963
Financial liabilities						
Fair value through profit or loss						
Derivative liabilities	₩	116,748		116,748	-	116,748
Borrowings		1,756,691	1,756,691		-	1,756,691
Other financial Liabilities		119,258			119,258	119,258
Derivative hedging instruments(*2)		3,174		3,174		3,174
Financial liabilities measured at amortized cost(*1)						
Trade accounts and notes payable		5,782,825			-	
Borrowings		24,213,688		24,310,166	-	24,310,166
Financial guarantee liabilities		12,972			-	
Others		3,241,459	-	-	-	-
Other financial Liabilities	_	65,256	<u> </u>	<u> </u>		
	₩	35,312,071	1,756,691	24,430,088	119,258	26,306,037

- (*1) Fair value of financial assets and liabilities measured at amortized cost, except borrowings, approximates their carrying amounts.
- (*2) The Group 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 Group 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) Finance income and costs by category of financial instrument for each of the six-month periods ended June 30, 2024 and 2023 are as follows:
 - ① For the six-month period ended June 30, 2024

(in millions of Won)		Finance income and costs						Other
		Interest income (expense)	Gain and loss on valuation	Gain and loss on foreign currency	Gain and loss on disposal	Others	Total	comprehensive income (loss)
Financial assets at fair value								
through profit or loss	₩		99,499		59,230	327	159,056	
Derivative assets		-	409,145		127,890	-	537,035	
Financial assets at fair value through other comprehensive income Financial assets measured at		-		-	-	22,887	22,887	(76,947)
amortized cost Financial liabilities at fair value		301,735	-	611,299	(38,349)	(7,124)	867,561	
through profit or loss			234.218	(74.475)			159.743	
Derivative liabilities			42,523	-	(125,997)		(83,474)	(22)
Financial liabilities measured at								
amortized cost		(519,012)	-	(1,018,174)		(14,671)	(1,551,857)	
	₩	(217,277)	785,385	(481,350)	22,774	1,419	110,951	(76,969)

21. Financial Instruments (cont'd)

② For the six-month period ended June 30, 2023

(in millions of Won)		Finance income and costs						
		Interest income (expense)	Gain and loss on valuation	Gain and loss on foreign currency	Gain and loss on disposal	Others	Total	comprehensive income (loss)
Financial assets at fair value through profit or loss Derivative assets	₩	3,516	348,160 259.865	-	133,684 125,475	457	485,817 385,340	
Financial assets at fair value through other comprehensive income		-	-	-	-	28,983	28,983	149,866
Financial assets measured at amortized cost Financial liabilities at fair value		222,520		453,354	(41,236)	6,427	641,065	-
through profit or loss Derivative liabilities		-	(120,304) (2,105)	(82,454)	(166,680)	-	(202,758) (168,785)	(1,181)
Financial liabilities measured at amortized cost		(500,945)	-	(705,268)	-	(14,117)	(1,220,330)	-
	₩	(274,909)	485,616	(334,368)	51,243	21,750	(50,668)	148,685

(b) Financial risk management

The Group is exposed to credit risk, liquidity risk and market risk arising from financial assets and liabilities. The Group's financial risk management objectives and policies are consistent with those disclosed in the consolidated financial statements as of and for the year ended December 31, 2023.

22. Share Capital and Capital Surplus

(a) Share capital as of June 30, 2024 and December 31, 2023 is as follows:

(Share, in Won)		June 30, 2024	December 31, 2023
Authorized shares	_	200,000,000	200,000,000
Par value	₩	5,000	5,000
Issued shares(*1)		84,571,230	84,571,230
Shared capital(*2)	₩	482,403,125,000	482,403,125,000

- (*1) As of June 30, 2024, total number of American Depository Receipts (ADRs) outstanding in overseas stock market amounts to 20,328,560 and such ADRs are equivalent to 5,082,140 shares of common stock.
- (*2) As of June 30, 2024, the difference between the ending balance of common stock and the aggregate par value of issued common stock is \text{\psi}59,547 million due to retirement of 11,909,395 treasury stocks.
- (b) Capital surplus as of June 30, 2024 and December 31, 2023 is as follows:

(in millions of Won)		June 30, 2024	December 31, 2023
Share premium	₩	463,825	463,825
Gain on disposal of treasury shares		808,994	808,994
Other capital surplus		383,198	390,515
	₩	1,656,017	1,663,334

23. Other Equity Items

Details of other equity items as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2024	December 31, 2023
Accumulated comprehensive loss of investments in associates and joint ventures	₩	(15,407)	(180,964)
Changes in fair value of equity investments at fair value through other comprehensive income		57,709	153,279
Foreign currency translation differences		610,493	94,605
Gains or losses on valuation of derivatives		(837)	(644)
Others		(23,761)	980
	₩	628,197	67,256

24. Treasury Shares

Based on the Board of Directors' resolution, the Group holds treasury shares for business purposes including price stabilization. Changes in treasury shares for the six-month period ended June 30, 2024 and the year ended December 31, 2023 are as follows:

(shares, in millions of Won)	June	e 30, :	2024	December 31, 2023		
	Number of shares		Amount	Number of shares		Amount
Beginning	8,695,023	₩	1,889,658	8,722,053	₩	1,892,308
Disposal of treasury shares	-		-	(27,030)		(2,650)
Ending	8,695,023	₩	1,889,658	8,695,023	₩	1,889,658

25. Revenue

(a) Disaggregation of revenue

- 1) Details of revenue disaggregated by types of revenue and timing of revenue recognition for each of the six-month periods ended June 30, 2024 and 2023 are as follows:
 - ① For the six-month period ended June 30, 2024

(in millions of Won)				Infrastructure				
	_	Steel	Trading	Construction	Logistics and others	Secondary battery materials	Others	Total
Types of revenue								
Revenue from sales of goods	₩	19,131,314	9,648,714	-	5,026	1,591,368	-	30,376,422
Revenue from services		432,743	1,588,599	58,063	165,983	2,516	4,790	2,252,694
Revenue from construction contract		-	-	3,758,839	-	13,608	-	3,772,447
Others	_	92,494	3,088	8,825	22,305	<u> </u>	33,356	160,068
	₩_	19,656,551	11,240,401	3,825,727	193,314	1,607,492	38,146	36,561,631
Timing of revenue recognition								
Revenue recognized at a point in time	₩	19,223,808	9,651,802	189,927	27,331	1,591,368	33,356	30,717,592
Revenue recognized over time	_	432,743	1,588,599	3,635,800	165,983	16,124	4,790	5,844,039
	₩	19,656,551	11,240,401	3,825,727	193,314	1,607,492	38,146	36,561,631

② For the six-month period ended June 30, 2023

(in millions of Won)				Infrastructure				
	_	Steel	Trading	Construction	Logistics and others	Secondary battery materials	Others	Total
Types of revenue								
Revenue from sales of goods	₩	20,321,796	10,717,959	=	12,974	1,830,997	-	32,883,726
Revenue from services		413,870	1,656,847	70,799	204,055	2,247	12,203	2,360,021
Revenue from construction contract		-	-	4,051,298	-	24,123	-	4,075,421
Others	_	85,635	2,686	6,284	24,923	<u> </u>	63,553	183,081
	₩	20,821,301	12,377,492	4,128,381	241,952	1,857,367	75,756	39,502,249
Timing of revenue recognition	_							
Revenue recognized at a point in time	₩	20,407,431	10,720,645	47,900	38,124	1,830,997	63,552	33,108,649
Revenue recognized over time	_	413,870	1,656,847	4,080,481	203,828	26,370	12,204	6,393,600
	₩	20,821,301	12,377,492	4,128,381	241,952	1,857,367	75,756	39,502,249

25. Revenue (cont'd)

- 2) Details of revenue disaggregated by types of revenue and timing of revenue recognition for each of the three-month periods ended June 30, 2024 and 2023 are as follows:
 - ① For the three-month period ended June 30, 2024

(in millions of Won)				Infrastructure				
	_	Steel	Trading	Construction	Logistics and others	Secondary battery materials	Others	Total
Types of revenue								
Revenue from sales of goods	₩	9,540,165	5,016,381	-	1,500	693,977	-	15,252,023
Revenue from services		196,881	889,025	32,805	82,350	639	900	1,202,600
Revenue from construction contract		-	-	1,944,860	-	6,516	-	1,951,376
Others		58,729	1,227	5,187	11,894		26,645	103,682
	₩	9,795,775	5,906,633	1,982,852	95,744	701,132	27,545	18,509,681
Timing of revenue recognition								
Revenue recognized at a point in time	₩	9,598,894	5,017,608	177,848	13,394	693,977	26,645	15,528,366
Revenue recognized over time		196,881	889,025	1,805,004	82,350	7,155	900	2,981,315
	₩	9,795,775	5,906,633	1,982,852	95,744	701,132	27,545	18,509,681

② For the three-month period ended June 30, 2023

(in millions of Won)				Infrastructure				
	_	Steel	Trading	Construction	Logistics and others	Secondary battery materials	Others	Total
Types of revenue								
Revenue from sales of goods	₩	10,226,688	5,692,130	-	3,676	931,911	-	16,854,405
Revenue from services		219,208	630,906	32,323	152,729	632	5,688	1,041,486
Revenue from construction contract		-	-	2,127,969	-	8,672	-	2,136,641
Others		44,927	1,177	4,480	8,536		29,719	88,839
	₩	10,490,823	6,324,213	2,164,772	164,941	941,215	35,407	20,121,371
Timing of revenue recognition	_							
Revenue recognized at a point in time	₩	10,271,614	5,693,308	38,429	12,406	931,911	29,717	16,977,385
Revenue recognized over time	_	219,209	630,905	2,126,343	152,535	9,304	5,690	3,143,986
	₩	10,490,823	6,324,213	2,164,772	164,941	941,215	35,407	20,121,371

(b) Details of contract assets and liabilities from contracts with customers as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2024	December 31, 2023
Receivables			
Account receivables	₩	9,884,286	9,155,853
Contract assets			
Due from customers for contract work		1,552,502	1,901,966
Contract liabilities			
Advance received		357,877	309,441
Due to customers for contract work		542,634	624,632
Unearned revenue		72,007	77,908

26. Contract under Input Method

(a) Details of outstanding contracts as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 20	024	December 31, 2023		
	Construction			Construction		
		segment	Others	segment	Others	
Accumulated cost	₩	25,337,217	246,847	28,663,723	272,321	
Accumulated contract profit		1,730,772	45,770	2,499,061	36,954	
Accumulated contract loss		(694,551)	(135)	(688,962)	(8,916)	
Accumulated contract revenue		26,373,438	292,482	30,473,822	300,359	

(b) Details of due from customers for contract work and due to customers for contract work as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2	2024	December 31, 2023		
		Construction		Construction		
	_	segment	Others	segment	Others	
Due from customers for contract	₩	1,541,055	24,207	1,873,681	42,557	
Due to customers for contract work		(532,966)	(9,668)	(608,339)	(16,293)	
	₩	1,008,089	14,539	1,265,342	26,264	

(c) Details of the provisions for construction loss as of June 30, 2024 and December 31, 2023 are as follows:

(in millions of Won)		June 30, 2024	December 31, 2023
Construction segment	₩	73,254	48,825
Others		857	1,749
	₩	74,111	50,574

(d) For the six-month period ended June 30, 2024, the total contract revenues and the estimated total contract costs have changed and the impact of such changes on profit before income tax for the current and future periods are as follows:

(in millions of Won)				Chang	Changes in profit (loss) of contract			
	_	Changes in total contract revenues	Changes in estimated total contract costs	Net income	Future income	Total		
Construction segment	₩	307,253	535,210	(208,138)	(19,819)	(227,957)		
Others		23,876	18,874	1,663	3,339	5,002		
	₩ _	331,129	554,084	(206,475)	(16,480)	(222,955)		

The above details of impact on profit for the current and future periods are calculated based on the total contract costs estimated considering the events that occurred for the period from the commencement date of the contract to June 30, 2024 and the estimated total contract revenue as of June 30, 2024. The estimated total contract costs and revenue are subject to change in future periods.

26. Contract under Input Method (cont'd)

(e) Uncertainty of estimates

1) Total contract revenues

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

2) Total contract costs

Material cost

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 costs 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							
recent purchasing price and quoted market price							

Labor cost Assumption based on standard monthly and daily labor cost

Assumption based on

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.

27. Selling and Administrative Expenses

(a) Other administrative expenses

Other administrative expenses for each of the three-month and six-month periods ended June 30, 2024 and 2023 are as follows:

(in millions of Won)		For the three-mont ended June	•	For the six-month periods ended June 30	
		2024	2023	2024	2023
Wages and salaries	₩	272,628	263,855	576,479	548,629
Expenses related to post-employment benefits		22,606	21,299	46,450	47,923
Other employee benefits		71,980	66,845	149,509	129,453
Travel		12,053	11,355	22,430	20,882
Depreciation		43,211	37,061	84,041	75,926
Amortization		29,409	23,454	56,622	45,977
Communication		2,419	2,662	6,309	5,362
Electricity		3,283	3,013	6,956	5,807
Taxes and public dues		33,594	39,186	48,831	54,368
Rental		17,293	15,296	22,058	26,614
Repairs		4,450	4,673	7,918	7,249
Entertainment		2,752	3,390	6,745	7,324
Advertising		24,962	24,296	45,314	45,373
Research & development		54,665	39,793	104,010	75,937
Service fees		72,806	58,970	126,153	95,571
Vehicles maintenance		1,963	2,074	3,971	3,996
Industry association fee		4,065	4,344	6,386	7,741
Conference		5,579	4,543	10,396	9,748
Others		14,317	17,288	31,166	31,515
Bad debt expenses		4,164	7,670	21,903	11,100
	₩	698,199	651,067	1,383,647	1,256,495

(b) Selling expenses

Selling expenses for each of the three-month and the six-month periods ended June 30, 2024 and 2023 are as follows:

(in millions of Won)		For the three-mont ended June	For the six-month periods ended June 30		
		2024	2023	2024	2023
Freight and custody expenses	₩	7,822	9,366	13,902	25,209
Operating expenses for distribution center		354	2,329	619	3,068
Sales commissions		19,703	18,299	41,757	40,720
Sales advertising		239	405	439	1,143
Sales promotion		2,464	3,660	5,207	6,914
Sample		557	496	1,125	994
Sales insurance premium		7,444	7,810	15,683	16,358
Contract cost		4,208	11,672	22,074	19,003
Others		2,007	2,510	4,355	6,443
	₩	44,798	56,547	105,161	119,852

28. Finance Income and Costs

Details of finance income and costs for each of the three-month and the six-month periods ended June 30, 2024 and 2023 are as follows:

(in millions of Won)		For the three-m ended Ju	•	For the six-mo	•
		2024	2023	2024	2023
Finance income					
Interest income(*1)	₩	129,299	121,745	301,735	226,036
Dividend income		5,004	12,314	23,214	29,440
Gain on foreign currency transactions		327,981	434,308	632,824	914,686
Gain on foreign currency translations		162,429	161,391	464,956	494,547
Gain on derivatives transactions		65,659	80,544	143,833	138,895
Gain on valuations of derivatives		214,933	46,275	515,281	315,213
Gain on disposal of financial assets at fair value					
through profit or loss		49,440	56,196	74,727	143,119
Gain on valuation of financial assets at fair value					
through profit or loss		41,331	61,734	126,637	390,197
Gain on valuation of financial liabilities at fair value					
through profit or loss		90,217	=	234,218	-
Others		1,729	2,751	4,898	8,676
	₩	1,088,022	977,258	2,522,323	2,660,809
Finance costs					
Interest expenses	₩	272,211	256,385	519,012	500,945
Loss on foreign currency transactions		287,728	391,288	553,796	827,666
Loss on foreign currency translations		439,002	301,274	1,025,334	915,935
Loss on derivatives transactions		81,395	98,913	141,940	180,100
Loss on valuation of derivatives		16,714	(18,259)	63,613	57,453
Loss on disposal of trade accounts and notes receivable		20,920	22,533	38,349	41,236
Loss on disposal of financial assets at fair value					
through profit or loss		2,603	3,299	15,497	9,435
Loss on valuation of financial assets at fair value					
through profit or loss		14,265	30,497	27,138	42,037
Loss on valuation of financial liabilities at fair value					
through profit or loss		-	47,672	-	120,304
Others	_	18,352	5,032	26,693	16,366
	₩ _	1,153,190	1,138,634	2,411,372	2,711,477

^(*1) Interest income calculated using the effective interest method for each of the six-month periods ended June 30, 2024 and 2023 amounts to \(\psi_301,735\) million and \(\psi_222,520\) million, respectively.

29. Other Non-Operating Income and Expenses

Details of other non-operating income and expenses for each of the three-month and the sixmonth periods ended June 30, 2024 and 2023 are as follows:

(in millions of Won)		For the three-month periods ended June 30		For the six-month periods ended June 30	
	_	2024	2023	2024	2023
Other non-operating income					
Recovery of other bad debt expenses Gain on disposals of investments	₩	1,369	230	3,691	555
in subsidiaries, associates and joint ventures(*1)		7,078	188	7,096	184,844
Gain on foreign currency transactions		6,053	3,213	12,050	5,499
Gain on valuation of firm commitment		17,876	(2,974)	31,323	5,562
Reversal of other provisions		(219)	1,456	2,240	9,758
Premium income		311	1,649	607	8,930
Gain on bargain purchase(*1)		-	· -	-	32,965
Gain on disposals of emission rights		10,373	24,059	13,343	24,059
Others		26,426	8,044	56,346	40,779
	₩	69,267	35,865	126,696	312,951
Other non-operating expenses	_				<u> </u>
Other bad debt expenses	₩	752	3,329	11,599	11,150
Loss on disposals of assets held for sale(*2) Loss on disposals of investments		3,590	-	34,812	102,470
·		40.574	17	40.504	4 404
in subsidiaries, associates and joint ventures	_	42,574	17	42,594	4,401
Loss on disposals of property, plant and equipment	Į.	22,975	48,979 143,257	36,340	67,666 143,257
Impairment loss on property, plant and equipment		22,491	4.772	63,122 11	4.772
Impariment loss on intangible assets Loss on valuation of firm commitment		17.835	13.392	19.144	22.270
Idle tangible asset expenses		875	5,916	2,341	12,283
Increase to provisions		4.114	5,274	7,193	6,545
Donations		11,938	3,825	35,071	32,632
Others		5,792	9,976	42,586	36,330
	₩	132,936	238,737	294,813	443,776

- (*1) During the six-month period ended June 30, 2023, investments in QSONE Co.,Ltd., which had been previously classified as investments in associates, were reclassified as investments in subsidiaries. As a result, the Group recognized \(\frac{\psi}{2}\)184,556 million of gain on disposals of investment in associates and \(\frac{\psi}{2}\)32,965 million of gain on bargain purchase.
- (*2) During the six-month period ended June 30, 2023, the Group disposed of CSP Compania Siderurgica do Pecem, which was classified as assets held for sale, and recognized W102,470 million of loss on disposals of assets held for sale.

30. 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 each of the three-month and six-month periods ended June 30, 2024 and 2023 are as follows (excluding finance costs and income tax expense):

(in millions of Won)		For the three-mor ended Jun	•	For the six-month periods ended June 30		
		2024	2023	2024	2023	
Raw material used, changes in inventories and others	₩	10,021,927	12,834,073	20,487,292	25,413,705	
Employee benefits expenses		1,205,676	1,071,420	2,416,870	2,137,186	
Outsourced processing cost		2,772,605	2,565,434	5,322,194	4,984,856	
Electricity and water expenses		260,632	289,789	583,210	564,669	
Depreciation(*1)		807,197	815,744	1,688,062	1,645,824	
Amortization		113,920	119,686	236,561	242,477	
Freight and custody expenses		569,508	571,234	1,243,976	1,085,533	
Sales commissions		19,703	18,299	41,757	40,720	
Loss on disposal of property, plant and equipment		22,975	48,979	36,340	67,666	
Impairment loss on property, plant and equipment		22,491	143,257	63,122	143,257	
Impariment loss on intangible assets		-	4,772	11	4,772	
Donations		11,937	3,825	35,071	32,632	
Other expenses		2,062,045	547,367	3,366,956	1,551,796	
	₩	17,890,616	19,033,879	35,521,422	37,915,093	

(*1) Includes depreciation of investment property.

31. Income Taxes

The effective tax rates of the Group for each of the six-month periods ended June 30, 2024 and 2023 are 20.52% and 20.43%, respectively.

In 2023, the Pillar Two legislation has been enacted in the Republic of Korea, where the controlling company of the Group is domiciled, and will be effective for the fiscal years starting on or after January 1, 2024. Accordingly, the Group calculated the Pillar Two income tax expense for the six-month period ended June 30, 2024 as the Group is subject to global minimum top-up tax under the application of the OECD's Pillar Two Model Rules via domestic legislation. As a result of the Group's assessment on the Pillar Two income taxes, the Group did not recognize any income tax expense for the six-month period ended June 30, 2024 as the impact of the global minimum top-up tax on the interim condensed consolidated financial statements as of June 30, 2024 would not be significant. Furthermore, the Group applies temporary exception to the recognition and disclosure of deferred taxes arising from the jurisdictional implementation of the Pillar Two Model Rules as prescribed in KIFRS 1012 *Income Taxes*, and accordingly, the Group did not recognize deferred tax assets and liabilities related to the global minimum top-up tax and does not disclose information related to deferred income tax.

32. Earnings per Share

(a) Basic earnings per share for each of the three-month and six-month periods ended June 30, 2024 and 2023 are as follows:

(in Won, except per share information)		For the three-mo ended Ju	•	For the six-month periods ended June 30			
	_	2024	2023	2024	2023		
Profit attributable to controlling interest	₩	529,933,233,564	689,732,922,913	1,070,648,510,509	1,416,152,245,557		
Weighted-average number of common shares outstanding(*1)		75,876,207	75,876,207	75,876,207	75,862,767		
Basic earnings per share	₩	6,984	9,090	14,110	18,667		

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

(shares)	For the three-mon ended June	•	For the six-month periods ended June 30			
_	2024	2023	2024	2023		
Total number of common shares issued	84,571,230	84,571,230	84,571,230	84,571,230		
Weighted-average number of treasury shares	(8,695,023)	(8,695,023)	(8,695,023)	(8,708,463)		
Weighted-average number of			· .			
common shares outstanding	75,876,207	75,876,207	75,876,207	75,862,767		

(b) The Group has exchangeable bonds that can be exchanged for common stocks with dilutive effects as of June 30, 2024. Considering the anti-dilution effect as of June 30, 2023, the Group did not calculate diluted earnings per share. Diluted earnings per share for the three-month and six-month periods ended June 30, 2024 are calculated as follows:

(in Won, except share information)		For the three-month period ended June 30, 2024	For the six-month period ended June 30, 2024
Profit for the period	₩	529,933,233,564	1,070,648,510,509
Gain or loss from revaluation of and exchange rate on exchangeable bonds Adjusted weighted-average number		(42,639,885,285)	(130,478,878,909)
of common shares outstanding(*1)		79,144,249	79,133,915
Diluted earnings(loss) per share		6,157	11,881

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

(shares)	For the three-month period ended June 30, 2024	For the six-month period ended June 30, 2024
Weighted-average number		
of common shares outstanding	75,876,207	75,876,207
Weighted-average number		
of potential common shares	3,268,042	3,257,708
Adjusted weighted-average number		
of common shares	79,144,249	79,133,915

33. Related Party Transactions

(a) Related parties of the Group as of June 30, 2024 are as follows:

Туре	Company				
Investments in associates and joint ventures	[Domestic] POSCO MC MATERIALS, Samcheok Blue Power Co.,Ltd., SNNC and others.				
	[Foreign] Roy Hill Holdings Pty Ltd, POSCO-NPS Niobium LLC, KOBRASCO, PT NICOLE METAL INDUSTRY, HBIS-POSCO Automotive Steel Co.,Ltd, South -East Asia Gas Pipeline Company Ltd., 9404-5515 Quebec Inc., AES Mong Duong Power Company Limited, KOREA LNG LTD., Nickel Mining Company SAS and others.				

- (b) Significant transactions between the Group and its related parties for each of the six-month periods ended June 30, 2024 and 2023 are as follows:
 - 1) For the six-month period ended June 30, 2024

(in millions of Won)		Sale	es and others(*1)	Purchase and others		
		Sales	Dividends	Others	Purchase of material	Others
Associates and joint ventures(*1)					, ,	
New Songdo International City Development, LLC	₩	116,952	-	1,427	-	128
SNNC		62,058	-	3	197,081	65
POSCO-SAMSUNG-SLOVAKIA PROCESSING		23,625	-	13	782	-
Gunggi Green Energy		17,933	-	-	-	3,155
POS-SeAH Steel Wire(Tianjin) CO., Ltd.		6,710	-	-	-	-
POS SeAH Steel Wire(Nantong) Co., Ltd.		26,485	-	-	1	-
South-East Asia Gas Pipeline Company Ltd.		-	35,255	-	-	-
POSCO MC MATERIALS		57,155	1,800	-	2,608	186
Samcheok Blue Power Co., Ltd.		139,917	5,424	428	-	_
Pocheon-Hwado Highway Corp.		50,663	-	-	-	1
POSCO(Guangdong) Automotive Steel Co., Ltd		133,238	-	-	157,256	_
HBIS-POSCO Automotive Steel Co., Ltd		23,714	-	-	12,396	-
Roy Hill Holdings Pty Ltd		-	218,861	-	958,554	-
Others	_	48,069	75,307	3,467	81,432	54,954
	₩	706,519	336,647	5,338	1,410,110	58,489

(*1) As of June 30, 2024, the Group provides payment guarantees to related parties (see Note 34).

33. Related Party Transactions (cont'd)

2) For the six-month period ended June 30, 2023

(in millions of Won)		Sale	es and others(*1)		Purchase and others		
					Purchase of		
		Sales	Dividends	Others	material	Others	
Associates and joint ventures(*1)							
New Songdo International City Development, LLC	₩	99,953	-	-	-	220	
SNNC		88,677	-	87	303,305	1,317	
Noeul Green Energy		6,499	-	-	-	1,182	
POS-SeAH Steel Wire(Tianjin) CO., Ltd.		7,505	-	-	-	-	
POS SeAH Steel Wire(Nantong) Co., Ltd.		20,125	-	-	74	-	
South-East Asia Gas Pipeline Company Ltd.		-	40,971	-	-	-	
POSCO MC MATERIALS		48,255	-	46	3,787	75	
Samcheok Blue Power Co., Ltd.		291,044	4,996	-	-	-	
Pocheon-Hwado Highway Corp.		47,879	-	-	-	-	
Roy Hill Holdings Pty Ltd		-	171,174	-	838,883	-	
Others		238,272	100,772	5,475	257,416	55,631	
	₩	848,209	317,913	5,608	1,403,465	58,425	

- (*1) As of June 30, 2023, the Group provides payment guarantees to related parties (see Note 34).
- (c) The balances of receivables and payables arising from significant transactions between the Group and its related parties as of June 30, 2024 and December 31, 2023 are as follows:
 - 1) June 30, 2024

(in millions of Won)		Receivable	es(*1)	Payables			
	Trade accounts and notes receivable	Loans	Others	Total	Trade accounts and notes payable	Others	Total
	110162 Lecelyable	Loans	Otileis	TOtal	liotes payable	Ottleis	Total
Associates and joint ventures							
New Songdo International City Development, LLC	₩ 28,547	-	1,690	30,237	-	13,465	13,465
Gunggi Green Energy	6,502	-	8,450	14,952	-	646	646
POSCO(Guangdong) Automotive Steel Co., Ltd	40,406	2,397	3	42,806	37,945	-	37,945
AMCI(WA)PTYLTD		140,730	-	140,730	-	-	-
HBIS-POSCOAutomotiveSteelCo.,Ltd	14,785	-	-	14,785	3,466	5,381	8,847
POS-SeAH Steel Wire(Tianjin) CO., Ltd.	3,705	-	-	3,705	-	-	-
Samcheok Blue Power Co., Ltd.	175,180	-	129	175,309	-	76,917	76,917
Nickel Mining Company SAS	-	66,918	382	67,300	-	358	358
POS-SeAH Steel Wire(Nantong) Co., Ltd.	16,601	-	-	16,601	-	-	-
POSCO MC MATERIALS	11,876	-	75	11,951	649	17	666
Pocheon-Hwado Highway Corp.	11,161	-	-	11,161	-	9,028	9,028
UlTrans LRT Co., Ltd.	1,139	51,049	8,964	61,152	-	2,554	2,554
Roy Hill Holdings Pty Ltd	83,192	-	22,136	105,328	287,688	-	287,688
SNNC	11,446	-	70	11,516	14,766	1,755	16,521
FQM Australia Holdings Pty Ltd	-	277,887	-	277,887	-	-	-
Others	19,779	16,259	130,948	166,986	7,113	8,323	15,436
	₩ 424,319	555,240	172,847	1,152,406	351,627	118,444	470,071

(*1) As of June 30, 2024, the Group recognizes an allowance for doubtful account for receivables above amounting to \text{W434,603 million}.

33. Related Party Transactions (cont'd)

2) December 31, 2023

(in millions of Won)			Receivable	s(*1)	Payables			
		Trade accounts and				Trade accounts and		
	_	notes receivable	Loans	Others	Total	notes payable	Others	Total
Associates and joint ventures								
New Songdo International City Development, LLC	₩	15,260	-	1,497	16,757	-	39,089	39,089
Gunggi Green Energy		10,714	-	8,450	19,164	-	149	149
POSCO(Guangdong) Automotive Steel Co., Ltd		59,910	-	3	59,913	52,961	-	52,961
AMCI(WA)PTYLTD		-	110,540	-	110,540	-	-	-
HBIS-POSCOAutomotiveSteelCo.,Ltd		21,912	-	103	22,015	1,805	8,837	10,642
POS-SeAH Steel Wire(Tianjin) CO., Ltd.		4,086	-	-	4,086	-	-	-
Samcheok Blue Power Co., Ltd.		162,759	-	213	162,972	-	9,605	9,605
Nickel Mining Company SAS		-	64,197	582	64,779	-	358	358
POS-SeAH Steel Wire(Nantong) Co., Ltd.		14,162	-	-	14,162	-	-	-
POSCO MC MATERIALS		13,835	-	82	13,917	1,156	-	1,156
Pocheon-Hwado Highway Corp.		33,944	-	-	33,944	-	7,712	7,712
UITrans LRT Co., Ltd.		-	46,335	8,395	54,730	-	2,398	2,398
Roy Hill Holdings Pty Ltd		88,217	-	22,002	110,219	263,440	-	263,440
SNNC		15,072	-	60	15,132	25,352	1,731	27,083
FQM Australia Holdings Pty Ltd		-	256,938	1,394	258,332	-	-	-
Others		17,499	16,589	124,849	158,937	4,837	5,599	10,436
	₩	457,370	494,599	167,630	1,119,599	349,551	75,478	425,029

- (*1) As of December 31, 2023, the Group recognizes an allowance for doubtful account for receivables above amounting to \text{W404,872 million}.
- (d) Major financial transactions between the Group and its related parties for the six-month period ended June 30, 2024 and the year ended December 31, 2023 are as follows:
 - 1) For the six-month period ended June 30, 2024

(in millions of Won)		Beginning	Lend	Collect	Others(*1)	Ending
Associates and joint ventures						
UITrans LRT Co., Ltd.	₩	46,335	4,718	-	(4)	51,049
PT. Tanggamus Electric Power		4,826	-	(644)	245	4,427
Nickel Mining Company SAS		64,197	-	-	2,721	66,918
KRAKATAU POS-CHEM DONG-SUH CHEMICAL		2,579	-	(1,379)	190	1,390
Hyo-chun Co., Ltd.		2,382	-	-	1	2,383
AMCI (WA) PTY LTD		112,177	3,018	-	25,535	140,730
POS-AUSTEM WUHAN AUTOMOTIVE CO.,LTD		5,158	-	-	174	5,332
FQM Australia Holdings Pty Ltd		256,938	1,543	-	19,406	277,887
POHANG E&E Co. , LTD		1,646	1,082	-	-	2,728
POSCO(Guangdong) Automotive Steel Co., Ltd.		14,332	39,330	(51,757)	492	2,397
	₩	510,570	49,691	(53,780)	48,760	555,241

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

33. Related Party Transactions (cont'd)

2) For the year ended December 31, 2023

(in millions of Won)	_	Beginning	Lend	Collect	Others(*1)	Ending
Associates and joint ventures	·					
UITrans LRT Co., Ltd.	₩	36,510	9,825	-	-	46,335
PT. Tanggamus Electric Power		5,014	-	(270)	82	4,826
PT. Wampu Electric Power		3,988	-	(4,063)	75	-
Nickel Mining Company SAS		63,024	-	(2,322)	3,495	64,197
KRAKATAU POS-CHEM DONG-SUH CHEMICAL		3,802	-	(1,323)	100	2,579
POS-SeAH Steel Wire (Thailand) Co., Ltd.		7,604	-	(7,828)	224	-
AMCI (WA) PTY LTD		104,281	6,620	-	1,276	112,177
POS-AUSTEM WUHAN AUTOMOTIVE CO.,LTD		10,138	-	(5,321)	341	5,158
Hyo-chun Co., Ltd.		2,382	-	-	-	2,382
POS-AUSTEM Suzhou Automotive Co., Ltd		12,673	-	(13,219)	546	-
FQM Australia Holdings Pty Ltd		247,868	2,637	-	6,433	256,938
POHANG E&E Co. , LTD		100	1,546	-	-	1,646
POSCO(Guangdong) Automotive Steel Co., Ltd.		35,131	-	(35,131)	-	-
	₩	532,515	20,628	(69,477)	12,572	496,238

^(*1) Includes adjusted foreign currency translation differences and others.

(e) For each of the six-month periods ended June 30, 2024 and 2023, details of compensation to the Group's key management officers are as follows:

(in millions of Won)	J	une 30, 2024	June 30, 2023
Short-term benefits	₩	85,415	92,034
Long-term benefits		4,878	4,524
Retirement benefits		14,934	18,602
	₩	105,227	115,160

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

34. 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 Group 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.

34. Commitments and Contingencies (cont'd)

(b) Details of guarantees

1) Contingent liabilities on outstanding guarantees provided by the Group as of June 30, 2024 are as follows:

(in millions of Won)				Guarante		Guarantee	
Guarantor	Guarantee beneficiary	Financial institution	Fe	oreign currency	Won equivalent	Foreign currency	Won equivalent
[The Company]	20000 4 1 0 111	0.5411.14	USD	000 000 000	077.040		
POSCO HOLDINGS INC.	POSCO Asia Co., Ltd.	Credit Agricole and others		200,000,000	277,840		
	POSCO Argentina S.A.U	HSBC and others	USD	1,079,900,000	1,500,197	501,595,483	696,816
POSCO	POSCO MEXICO S.A. DE C.V.	BOA and others	USD	60,000,000	83,352	60,000,000	83,352
	POSCO-VIETNAM Co., Ltd.	Shinhan Bank and others	USD	110,000,000	152,812	80,000,000	111,136
	PT. KRAKATAU POSCO	Export-Import Bank of					
		Korea and others	USD	680,000,000	944,656	680,000,000	944,656
	POSCO COATED STEEL (THAILAND) CO., LTD.	HSBC and others	THB	4,000,000,000	150,840	2,880,000,000	108,608
	POSCO Maharashtra Steel Private Limited	DBS	USD	40,000,000	55,568	20,000,000	27,78
	POSCO ASSAN TST STEEL INDUSTRY Inc	Citibank and others	USD	136,500,000	189,626	136,500,000	189,62
POSCO INTERNATIONAL Corporation	POSCO INTERNATIONAL GLOBAL DEVELOPMENT	POSCO Asia Co., Ltd.					
	PTE. LTD.		USD	180,000,000	250,056	150,000,000	208,38
	GOLDEN LACE POSCO INTERNATIONAL CO., LTD.	POSCO Asia Co., Ltd.	USD	13,200,000	18,337	11,000,000	15,28
	PT. Bio Inti Agrindo	BTPN and others	IDR	1,232,000,000,000	104,350	1,160,000,000,000	98,25
	POSCO ASSAN TST STEEL INDUSTRY Inc	Woori Bank Hong Kong and others	USD	13,650,000	18,963	13,650,000	18,963
	POSCO INTERNATIONAL Deutschland GmbH	Bank Mendes Gans Amsterdam				19,467,000	27,04
	POSCO INTERNATIONAL AMERICA CORP.					20,013,497	27,80
	POSCO INTERNATIONAL JAPAN Corp.					6.380.531	8.86
	POSCO INTERNATIONAL SINGAPORE PTE., LTD.						
	POSCO INTERNATIONAL MALAYSIA SDN. BHD.						
	POSCO INTERNATIONAL Italia S.R.L.						
	POSCO INTERNATIONAL MEXICO S.A. de C.V.						
	POSCO INTERNATIONAL AUSTRALIA HOLDINGS PTY LTD						
	POSCO INTERNATIONAL NARRABRI INVESTMENT		USD	50,000,000	69,460		
	GRAIN TERMINAL HOLDING PTE. LTD.	Export-Import Bank of					
		Korea and others	USD	27,000,000	37,508	27,000,000	37,50
	POSCO INTERNATIONAL E&P MALAYSIA SDN. BHD.	SC MALAYSIA	USD	5.000.000	6,946	5,000,000	6,94
	PT. KRAKATAU POSCO ENERGY	POSCO Asia Co., Ltd. and others	USD	102,903,407	142,953	47,251,419	65,64
	Posco International Mexico e-Mobility S.A DE C.V.	Export-Import Bank of	000	102,300,407	142,000	47,231,413	00,04
	1 0000 monatonal moneto o modiny 0.71 DE 0.11	Korea and others	USD	31,054,800	43,141	30,379,000	42,200
	PT POSCO INTERNATIONAL ENP INDONESIA	PT Bank Negara Indonesia	USD	750,000	1.042	750.000	1.04
POSCO Eco & Challenge Co., Ltd.	POSCO E&C Vietnam Co., Ltd.	Credit Agricole and others	USD	21.000.000	29.173	21.000.000	29.17
POSCO STEELEON CO., LTD.	Myanmar POSCO C&C Company, Limited.	POSCO Asia Co., Ltd.	USD	13.984.947	19.428	9.952.170	13.82
FOSCO STEELEON CO., LTD.	ULTIUM CAM GP INC.	Investissement Quebec,	030	13,304,347	13,420	3,332,170	13,02
POSCO FUTURE M CO., LTD.	DETION CAN OF INC.	Strategic Innovation Fund	CAD	299,562,500	303.684	29.538.400	29.94
POSCO WIDE Co., Ltd	POSCO	Seoul Guarantee Insurance	KRW	299,302,300	303,084	25,556,400	25,54
FOSCO WIDE Co., Eta	POSCO FUTURE M CO., LTD.	Seoul Guarantee Insulance	KRW	210	210	210	210
	FOSCO FOTONE W.CO., ETD.		KITEV	210	210	210	211
[Associates and joint ventures]							
POSCO HOLDINGS INC.	Nickel Mining Company SAS	SMBC	EUR	46,000,000	68,405	46,000,000	68,40
POSCO	LLP POSUK Titanium	SMBC London	USD	13,050,000	18,129	13,050,000	18,12
POSCO INTERNATIONAL Corporation	GLOBAL KOMSCO Daewoo LLC	Hana Bank Bahrain	USD	6,650,000	9,238	6,650,000	9,23
POSCO Eco & Challenge Co., Ltd.(*1)	Chun-cheon Energy Co., Ltd	Kookmin Bank and others	KRW	127,700	127,700	127,700	127,70
[Others]							
POSCO Eco & Challenge Co., Ltd.(*2)	Subcontractors for maintenance projects, etc.	Kookmin Bank and others	KRW	1.259.764	1.259.764	502.569	502.56
POSCO WIDE Co., Ltd.	Korea Electric Power Corporation and others	Seoul Guarantee Insurance	KRW	2.176	2.176	2.176	2.17
POSCO AUSTRALIA PTY LTD	Department of Trade and	Woori Bank and others					
	Investment (NSW Government) and others		AUD	16,746,000	15,463	16,746,000	15,46
PT. Bio Inti Agrindo	KSU Mandob Seiatera	Bank Muamalat	IDR	80.000.000.000	6,776	30,933,333,333	2.62
POSCO Maharashtra Steel Private Limited		HSBC and others	INR	833,764,043	13,882	833,764,043	13,88
and the same of th			USD	2,784,643,154	3,868,425	1,859,639,100	2,583,41
			KRW	1,389,880	1.389.880	632.685	632.68
			IDR	1,312,000,000,000	111,126	1,190,933,333,333	100,87
			INR	833,764,043	13,882	833,764,043	13,88
			THB		150,840	2,880,000,000	108,60
			EUR	4,000,000,000			
				46,000,000	68,405	46,000,000	68,40
			AUD	16,746,000 299,562,500	15,463 303.684	16,746,000 29,538,400	15,463 29.945

^(*1) The above contingencies include PF contracts, which provide credit enhancement through payment guarantee in relation to the SOC projects as of June 30, 2024.

^(*2) The above contingencies include PF contracts, which guarantee the subcontractors' intermediate payment loans in relation to the maintenance projects and others as of June 30, 2024.

- 2) Details of credit enhancements by type of the Group's PF business as of June 30, 2024 are as follows:
 - Maintenance projects and others
 - a. The information about maturity of the loans related to PF credit enhancements such as debt acceptance and fund supplementation is as follow:

(in millions of Won)										В	alance of the loan	s		
Provider	Projects(*1)	Borrower	Туре	Credit enhancement measures	-	Agreed amount	Executed amount	Total	Within 3 months	3~6 months	6 months ~1 year	1 yeer ~2 yeers	2 years ~3 years	After 3 years
[The Company] POSCO Eco & Challenge Co., Ltd.	Other projects	JB CLARK HILLS CORP	Main PF	Debt assumption										
					₩	45,844	38,203	38,203	-	-	-	38,203	-	-
[Associates and joint ventures]	01			.										
POSCO Eco & Challenge Co., Ltd.	Other projects	New Songdo International City Development, LLC	Mortgage loan	Debt assumption		538,200	301,300	301,300	-	16,300	-	-	285,000	-
[Others]														
POSCO Eco & Challenge Co., Ltd.	Maintenance projects	Bangbae Shindonga Apartment Reconstruction and Maintenance Project	Main PF	Debt assumption		928 286	418.846	418.846	22.500	38.100	91.020	123,545	96.817	46.864
	Other projects	Mastern 123 Yeoju Samgyo PFV co., Ltd.	Main PF	Debt assumption		63.700	49.000	49.000	49.000	30,100	31,020	120,040	30,017	40,004
	Other projects	Civic Center PFV	Bridge loan	Debt assumption		45.000	45.000	45.000	-		45.000			
	Other projects	Daon I & P	Main PF	Joint guarantee		36.000	4.600	4.600				4.600	-	_
	Other projects	Ecocity	Main PF	Debt assumption		53,300	22,800	22,800	-	-		-	22,800	
POSCO DX	Other projects	Jeonnong schoo keeper co.	Main PF	Supplemental funding									,	
		and others		agreement	_	1,122,320	123,309	434,762						434,762
						2,248,606	663,555	975,008	71,500	38,100	136,020	128,145	119,617	481,626
					₩	2,832,650	1,003,058	1,314,511	71,500	54,400	136,020	166,348	404,617	481,626

- (*1) The maintenance project mainly consists of reconstruction and condominium construction projects, and other projects consist of construction of office buildings, retail shops, warehouses and educational facilities.
- b. Details of conditional debt acceptance and principal and interest repayment commitments in the event of non-compliance with completion guarantee covenant as of June 30, 2024 are as follows:

(in millions of Won)	Number of constructions		Contract amount	Contingency amount(*1)(*2)	Balance of loans
Maintenance projects	21	₩.	5 865 693	2 436 351	1 254 117

- (*1) The overlapping amount with other credit enhancement measures such as the agreed debt acceptance upon loan origination amounts to \(\psi_78,443\) million for the maintenance projects.
- (*2) In the case of joint subcontracting projects, the total joint guarantee amount of the project participants has been disclosed. However, the final execution amount of guarantee for construction completion may vary depending on factors such as the reasons attributable to the project participants upon actual execution of guarantee for the responsibility completion.

c. Details of contingencies of claim for damages in the event of non-compliance with construction completion covenant as of June 30, 2024 are as follows:

(in millions of Won)	Number of constructions		Contract amount	Contingency amount(*1)(*2)	Balance of loans
Maintenance projects	1	₩	309,261	76,000	20,000
Other projects	38		10,149,491	8,304,070	6,208,267
	39	₩	10,458,752	8,380,070	6,228,267

- (*1) The overlapping amount with other credit enhancement measures such as the agreed debt assumption upon loan origination amounts to \$\overline{\psi}\$53,600 million for the maintenance projects.
- (*2) In the case of joint subcontracting projects, the total joint guarantee amount of the project participants has been disclosed. However, the final execution amount of guarantee for construction completion may vary depending on factors such as the reasons attributable to the project participants upon actual execution of guarantee for the responsibility completion.

② SOC projects

Provider	Recipient	Credit enhancement measures	Number of constructions	Approved amount	Remaining balance after repayment
[Associates and joint ventures]					
POSCO DX	UITrans LRT Co., Ltd(*1)	Providing funds and debt assumption	2 ₩	81.883	31.797
	Pocheon-Hwado Highway Corp.(*2)	Providing funds	1	24.923	22,323
POSCO Eco & Challenge Co., Ltd.	UlTrans LRT Co., Ltd(*1)	Providing funds and		- 1,	
		debt assumption	2	205,051	160,698
	Pocheon-Hwado Highway Corp.(*2)	Providing funds	1	319,526	286,182
	POHANG E&E Co., LTD(*3)	Providing funds and			
		supplemental funding agreement	2	71,930	47,664
	Pureun Tongyeong Enviro Co., Ltd.(*3)	Providing funds	1	22,714	11,728
	Pure Gimpo.Co.,Ltd(*3)	Providing funds	1	51,565	24,687
	Clean Iksan Co.,Ltd(*3)	Providing funds	1	44,054 `	23.130
			11	821,646	608,209
[Others]					
POSCO DX	Western Inland highway CO.,LTD.	Providing funds	1	47,348	21,876
	Busan Sanseong Tunnel	Refinancing	1	7,621	13,648
POSCO Eco & Challenge Co., Ltd.	Western Seoul highway CO.,LTD.	Supplemental funding agreement		.,	,
	and others		11	62,720	30,047
	Western Inland highway CO.,LTD.	Providing funds			
	and others		44	2,884,656	1,397,119
	Pohang Youngil Bay New Port	Debt assumption	1	2,250	1,602
	Busan Sanseong Tunnel	Refinancing	1	35,296	26,750
			59	3,039,891	1,491,042
			70 ₩	3,861,537	2,099,251

- (*1) The Group provides a funding commitment of W79,625 million (including other shares: W279,900 million) equivalent to the Group's share of the loan balance for the private investment project.
- (*2) The Group provides a funding commitment of \(\psi_308,505\) million (including other shares: \(\psi_558,077\) million) equivalent to the Group's share of the loan balance for the private investment project.
- (*3) The Group provides a funding commitment of \(\psi\)103,437 million (including other shares: \(\psi\)189,587 million) equivalent to the Group's share of the loan balance for the private investment project.

3) Other guarantees

① As of June 30, 2024, the payment guarantees that the Group provides to clients, such as contract performance guarantees, installment guarantees, and defect guarantees, by subscribing to insurance policies with guarantee insurance companies or issuing guarantee certificates are as follows:

Provider of credit enhancement	Recipient of credit enhancement	Types of guarantees		Agreed amount	Executed amount	Guarantor
[Subsidiaries]						
POSCO Eco & Challenge Co., Ltd.	Ventanas Philippines	Guarantee on performance				TRADE INSURANCE
	Construction Inc	for contracts and others	₩	10,845	10,845	CORPORATION and other:
POSCO WIDE Co., Ltd	POSCO Eco & Challenge Co., Ltd.	Guarantee on performance				
		and others		255	255	Seoul Guarantee Insurance
	POSCO DX	Guarantee on performance		11	11	Seoul Guarantee Insurance
	POSCO STEELEON CO.,LTD.	Guarantee on performance		45	45	Seoul Guarantee Insurance
	POSCO INTERNATIONAL Corporation	Guarantee on performance		134	134	Seoul Guarantee Insurance
			_	11,290	11,290	
[Associates and joint ventures]			_			
POSCO Eco & Challenge Co., Ltd.	PT.Tanggamus Electric Power	Letter of credit		2,818	2,818	Hana Bank
	PT. Wampu Electric Power	Letter of credit		3,056	3,056	Hana Bank
	Pocheon-Hwado Highway Corp.	Guarantee on performance				Construction Guarantee
	, ,	for projects		23,315	23,315	Cooperative
			_	29,189	29,189	
[Others]			_			
POSCO Eco & Challenge Co., Ltd.	DAEWOO ENGINEERING	Guarantee on performance				
	& CONSTRUCTION Co., Ltd	for construction and others				Construction Guarantee
	and others			7,449,441	7,449,357	Cooperative and others
POSCO WIDE Co., Ltd	Pureun Paju Co., Ltd. and others	Guarantee on performance				
		and others		17,495	17,495	Seoul Guarantee Insurance
POSCO M-TECH	DONGKUK STEEL MILL CO.,LTD.	Guarantee on performance		1,309	1,309	Seoul Guarantee Insurance
Shinan Green Energy Co.,LTD.	Sinan-gun Jeollanam-do	Guarantee on performance		2,963	2,963	Seoul Guarantee Insurance
POSCO DX	Western Inland highway CO.,LTD.	Supplemental funding				
	and others	agreement and others	_	1,685	1,685	Kookmin Bank and others
				7,472,893	7,472,809	
			₩	7,513,372	7,513,288	

② As of June 30, 2024, the primary payment guarantees and other guarantees that the Group is provided from the guarantee institution are as follows:

Provider	Types of guarantees		Agreed amount	Executed amount
Construction Guarantee Cooperative	Subcontractor Payment Guarantee and others	— ₩	6,906,838	6,906,838
Engineering guarantee insurance	Guarantee on performance for EPC contracts and others		890,187	477,569
Seoul Guarantee Insurance	Construction performance guarantee and others		564,380	564,380
Korea Housing & Urban Guarantee Corporation	Housing Guarantee and others		5,225,790	5,220,539
Woori Bank and others Korea software financial	Foreign currency guarantee Guarantee on performance		2,250,568	888,981
cooperative	for contracts		122,088	122,088
Seoul Guarantee Insurance	Guarantee on performance for contracts		49,381	49,381
Construction Guarantee Cooperative	Guarantee on performance for contracts		4,397	4,397
		₩	16,013,629	14,234,173

34. Commitments and Contingencies (cont'd)

(c) Other commitments

Details of other commitments of the Group as of June 30, 2024 are as follows:

Company	Description
POSCO HOLDINGS INC.	As of June 30, 2024, 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 1.05 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 June 30, 2024, the ending balance of the borrowing amounts to USD 1.02 million.
	POSCO HOLDINGS INC. has deposited 3,247,373 treasury shares for exchange with the Korea Securities Depository in relation to foreign currency exchangeable bonds as of June 30, 2024.
POSCO	POSCO entered into long-term contracts to purchase iron ore, coal, nickel and others. The long-term purchase contract period is more than two years for iron ore, three years for coal, and one year for nickel. These contracts provide for periodic price adjustments based on the market price. As of June 30, 2024, 40 million tons of iron ore and 11 million tons of coal remained to be purchased under such long-term contracts.
	POSCO entered into an agreement with Tangguh Liquefied Natural Gas (LNG) Consortium in Indonesia to purchase 550 thousand tons of LNG annually for 20 years commencing in August 2005. The purchase price is subject to change, based on changes of the monthly standard oil price (JCC) and with a price ceiling.
	POSCO has a long-term service contract for the transportation of raw material. As of June 30, 2024, there are 36 vessels under contract, and the average remaining contract period is about 7 years.
	POSCO entered into an agreement (LNG SPA) with POSCO INTERNATIONAL SINGAPORE PTE LTD. to purchase 370 thousand tons of LNG annually for 15 years commencing in November 2026. The purchase price is subject to change based on changes of U.S. Henry Hub Natural Gas Spot Price. POSCO has extension option of extending the purchase contract by five years. Meanwhile, POSCO INTERNATIONAL Corporation has signed an LNG SPA with Cheniere Marketing, LLC for the purpose of supplying LNG to POSCO. As an actual buyer of LNG, POSCO provides performance guarantee for POSCO INTERNATIONAL Corporation's SPA to producer, Cheniere Marketing, LLC. The performance guarantee contract period is from September 30, 2022 to the date of expiration of SPA contract which is September 30, 2046, or the date of termination of payment obligation under the guarantee contract.
POSCO INTERNATIONAL Corporation	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 June 30, 2024, the amount which is exposed to the ship purchase agreements entered into is USD 31 million.
	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 December 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.
POSCO Eco & Challenge Co., Ltd.	As of June 30, 2024, according to the investor agreement for the construction of Samcheok Thermal Power Plant, POSCO Eco & Challenge Co., Ltd. is obligated to make contributions for core capital, unqualified investment, excess expenses occurred for business, and acceleration of payment. Among them, the remaining amount of the core capital investment obligation is W17,509 million and the payment period is expected to be in the fourth quarter of 2024.
POSCO FUTURE MATERIALS CANADA INC. (formerly, POSCO CHEMICAL CANADA INC.)	In accordance with the GP Shareholders Agreement between POSCO FUTURE MATERIALS CANADA INC. and GM Battery Raw Materials Corporation (hereinafter referred to as GM), if, POSCO FUTURE M Co., LTD. (POSCO FUTURE MATERIALS CANADA INC's shareholders) fails to obtain approval for the export of national core technology under the 'Act On Prevention Of Divulgence And Protection Of Industrial Technology' in Korea within two years from the date of signing the agreement, GM may sell its shares of ULTIUM CAM GP INC. and ULTIUM CAM LIMITED PARTNERSHIP held by Posco Future Materials Canada Inc GM has the right to exercise this put option until the 27th month from the date of signing the agreement. When GM exercises the put option, Posco Future Materials Canada Inc. is required to immediately purchase GM's shares at a price of the fair market value of GM's shares or 125% of the total amount of capital contributions made by GM before the closing of the sale, whichever amount is greater. As of June 30, 2024, the Company recognized \text{W170,241} million as other financial liabilities related to the terms of this agreement.

(d) Litigation in progress

The Group is involved in 392 lawsuits aggregating to \(\psi 1,045.1\) billion as defendant as of June 30, 2024, which arise from the ordinary course of business such as claim for confirmation of employee status. The Group has recognized provisions amounting to \(\psi 51.4\) billion for 42 lawsuits based on its reliable estimate of outflow of resources. However, the Group has not recognized any provisions for the other lawsuits and claim since the Group believes that it does not have a present obligation as of June 30, 2024.

(e) Other contingencies

Other major contingencies for the Group as of June 30, 2024 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.
	The Company has a joint obligation with the company newly established through spin-off, POSCO, to discharge all liabilities (including financial guarantee contracts) incurred prior to the spin-off date.
POSCO INTERNATIONAL Corporation	As of June 30, 2024, POSCO INTERNATIONAL Corporation has provided 24 blank promissory notes and 18 blank checks to Korea Energy Agency and others as collateral for the guarantee on performance for contracts and others.
POSCO Eco & Challenge Co., Ltd.	As of June 30, 2024, POSCO Eco & Challenge Co., Ltd. has provided 39 blank checks and 4 blank promissory notes as collateral for agreements and outstanding loans.
POSCO DX	As of June 30, 2024, POSCO DX has provided 7 blank checks to financial institutions as collateral for the guarantee on performance for contracts and others.

35. Cash Flows from Operating Activities

Changes in operating assets and liabilities for each of the six-month periods ended June 30, 2024 and 2023 are as follows:

(in millions of Won)		June 30, 2024	June 30, 2023
Trade accounts and notes receivable	₩	(71,203)	(1,730,909)
Other receivables		(28,163)	(30,340)
Inventories		511,035	481,241
Other current assets		(85,752)	(78,514)
Other non-current assets		8,506	(4,395)
Trade accounts and notes payable		(417,073)	311,826
Other payables		(99,670)	(487,729)
Other current liabilities		(3,409)	(169,785)
Provisions		(75,432)	(98,110)
Right to use and profit		101,557	-
Payments of severance benefits		(211,028)	(178,504)
Plan assets		107,555	125,929
Other non-current liabilities		(9,575)	(27,549)
	₩	(272,652)	(1,886,839)

36. Operating Segments

(a) The Group's operating businesses are organized based on the nature of markets and customers. During the six-month period ended June 30, 2024, the Group changed its internal organization and internal reporting structures. As a result, operating segments were re-categorized according to the revised reporting materials provided to the management for decision-making.

Segment assets, liabilities and profit (loss) are generally measured based on separate financial statements in accordance with KIFRS of the subsidiaries that constitute reportable operating segments.

Meanwhile the Group has classified the business segment and the subsidiaries in each segments are as follows:

Operatin	g segments	Main Business					
Steel	_	Manufacture and sales of steel products					
Green infrastructure	Trading	Supply and purchase transactions between domestic and foreign companies, power generation, and resource development					
	Construction	Design, production and construction of steel mills and their facilities, commercial and residential facilities, etc.					
	Logistics and others	Logistics, network and system integration business					
Secondary battery							
Materials		EV battery materials such as lithium, nickel, negative/cathode materials, and hydrogen business					
Others		POSCO HOLDINGS. INC., Controlling company and Investment business					

- (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 net income determined by KIFRS. 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.
- (c) The information about reportable segments as of and for each of the six-month periods ended June 30, 2024 and 2023 is as follows:
 - 1) For the six-month period ended June 30, 2024

		Infrastructure						
(in millions of Won)		Steel	Trading	Construction	Logistics and others	Secondary bettery materials	Others	Total
External revenues	₩	19,656,551	11,240,401	3,825,727	193,314	1,607,490	38,148	36,561,631
Internal revenues		11,236,484	10,393,136	1,382,383	1,886,062	495,615	1,077,385	26,471,065
Inter segment revenues		7,335,342	4,756,841	1,319,861	1,873,072	479,907	1,066,528	16,831,551
Total revenues		30,893,035	21,633,537	5,208,110	2,079,376	2,103,105	1,115,534	63,032,697
Segment profits		465,810	430,258	18,095	71,514	(12,699)	1,118,847	2,091,825

2) For the six-month period ended June 31, 2023

				Infrastructure		Secondary bettery		
(in millions of Won)	_	Steel	Construction	Trading	Energy and others	materials	Others	Total
External revenues	₩	20,821,301	12,377,492	4,128,381	241,952	1,857,367	75,756	39,502,249
Internal revenues		11,495,481	9,792,258	885,957	1,638,778	498,188	771,340	25,082,002
Inter segment revenue	S	7,808,416	4,690,516	824,581	1,633,246	496,674	761,681	16,215,114
Total revenues		32,316,782	22,169,750	5,014,338	1,880,730	2,355,555	847,096	64,584,251
Segment profits		819,576	505,524	91,304	78,067	52,748	767,936	2,315,155

36. Operating Segments (cont'd)

(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:

(in millions of Won)	·	June 30, 2024	June 30, 2023
Total profit for reportable segments	₩	2,091,825	2,315,155
Corporate fair value adjustments		(34,317)	183,004
Elimination of inter-segment profit		(903,473)	(881,889)
Income tax expense		298,001	414,884
Profit before income tax expense	₩	1,452,036	2,031,154

37. Events After the Reporting Period

- (a) Pursuant to the resolution of the Board of Directors on July 12, 2024, the Company decided to retire treasury shares for 1,691,425 common shares held as of July 12, 2024, and to newly purchase and retire 255,428 common shares and retired treasury shares on July 31 and August 6, 2024 respectively.
- (b) Pursuant to the resolution of the Board of Directors on August 9, 2024, the Company decided to pay interim cash dividends of \(\frac{\text{W}}{2}\),500 per common share (total dividend: \(\frac{\text{W}}{189.7}\) billion).
- (c) POSCO FUTURE M CO., LTD, a subsidiary, issued the 22-1 and 22-2 unsecured bonds for the purpose of facility funds and debt repayment, and the amount of issuance is W480 billion and W120 billion, respectively, on July 24, 2024.