Interim condensed consolidated financial statements for the three-month period ended March 31, 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 March 31, 2024, and the related interim condensed consolidated statement of comprehensive income, interim condensed consolidated statement of changes in equity and interim condensed consolidated statement of cash flows for the three-month period ended March 31, 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, 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.



Other matters

The interim condensed consolidated statement of comprehensive income, interim condensed consolidated statement of changes in equity and interim condensed consolidated statement of cash flows for the three-month period ended March 31, 2023, prepared in accordance with KIFRS 1034 and presented for comparative purposes, have been reviewed by Samjong KPMG, whose review report dated May 15, 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.



May 16, 2024

This review report is effective as of May 16, 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 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 three-month periods ended March 31, 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 Representative Director and President

POSCO HODINGS INC.

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

(in millions of Won)	Notes	March 31, 2024 (unaudited)	December 31, 2023
Assets			
Cash and cash equivalents	21 ₩	6,873,603	6,670,879
Trade accounts and notes receivable, net	4,15,21,25,26,33	11,675,370	11,015,303
Other receivables, net	5,21,33	2,052,043	1,947,529
Other short-term financial assets	6,21	11,205,043	11,403,166
Inventories	7	13,975,042	13,825,514
Current income tax assets		105,146	101,979
Assets held for sale	8	5,336	406,945
Other current assets	14	907,812	840,984
Total current assets		46,799,395	46,212,299
Long-term trade accounts and notes receivable, net	4,21	48,882	42,516
Other receivables, net	5,21,33	1,552,424	1,452,445
Other long-term financial assets	6,21	2,909,986	2,708,325
Investments in associates and joint ventures	9	5,049,382	5,020,264
Investment property, net	11	1,579,084	1,616,294
Property, plant and equipment, net	12	36,670,868	35,206,248
Intangible assets, net	13	4,722,373	4,714,784
Defined benefit assets, net	19	486,152	464,758
Deferred tax assets		3,288,852	3,334,266
Other non-current assets	14	159,168	173,195
Total non-current assets		56,467,171	54,733,095
Total assets	W.	103,266,566	100,945,394

(continued)

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

(in millions of Won)	Notes		March 31, 2024 (unaudited)	December 31, 2023
Liabilities				
Trade accounts and notes payable Short-term borrowings and current installments	21,33	₩	5,383,455	5,782,825
of long-term borrowings	15,21		12,341,916	10,959,217
Other payables	16,21,33		3,302,340	2,737,478
Other short-term financial liabilities	17,21		178,426	163,626
Current income tax liabilities			221,057	319,096
Liabilities directly associated with the assets held for sale	8		-	141,890
Provisions	18		357,987	419,744
Other current liabilities	20,25,26	_	1,291,997	1,337,642
Total current liabilities		_	23,077,178	21,861,518
Long-term borrowings, excluding current installments	15.21		15,403,396	15,011,163
Other payables	16.21		851,570	873,565
Other long-term financial liabilities	17,21		83,834	153,782
Defined benefit liabilities, net	19		68,107	38,754
Deferred tax liabilities			2,797,317	2,760,234
Long-term provisions	18		480,464	468,009
Other non-current liabilities	20	_	107,930	114,472
Total non-current liabilities		_	19,792,618	19,419,979
Total liabilities		_	42,869,796	41,281,497
Equity				
Share capital	22		482,403	482,403
Capital surplus	22		1,655,599	1,663,334
Accumulated other comprehensive income	23		312,581	67,256
Treasury shares	24		(1,889,658)	(1,889,658)
Retained earnings		_	54,231,554	53,857,514
Equity attributable to owners of the controlling company			54,792,479	54,180,849
Non-controlling interests		_	5,604,291	5,483,048
Total equity		_	60,396,770	59,663,897
Total liabilities and equity		₩_	103,266,566	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 periods ended March 31, 2024 and 2023 (Unaudited)

			Three-month p	
(in millions of Won, except per share information)	Notes		March 31, 2024 (Unaudited)	March 31, 2023 (Unaudited)
(in initions of won, except per share infoliation)	Notes		(unaudited)	(Unaudited)
Revenue	25,26,33	₩	18,051,950	19,380,878
Cost of sales	26,30		(16,723,117)	(18,007,442)
Gross profit			1,328,833	1,373,438
Selling and administrative expenses	21,27,30			
Other administrative expenses			(685,448)	(605,428)
Selling expenses		-	(60,363)	(63,305)
Operating profit			583,022	704,703
Share of profit of subsidiaries under equity method	9		77,818	113,799
Finance income and costs	21,28			
Finance income			1,434,301	1,683,550
Finance costs			(1,258,182)	(1,572,842)
Other non-operating income and expenses	21,29,30			
Other non-operating income			57,429	277,085
Other non-operating expenses		-	(161,877)	(205,038)
Profit before income tax			732,511	1,001,257
Income tax expense	31	-	(124,696)	(160,952)
Profit			607,815	840,305
Other comprehensive income (loss) Items that will not be reclassified subsequently to profit or loss: Capital adjustement arising from investments in subsidiaries under e	vauity method		1.035	726
Foreign currency translation differences	iquity method		58.654	55,898
Remeasurements of defined benefit plans	19		5,518	(29,314)
Net changes in fair value of equity investments at fair value through				, , ,
other comprehensive income	21		7,648	142,013
Items that are or may be reclassified subsequently to profit or loss:				
Capital adjustement arising from investments in subsidiaries under e	quity method		77,149	230,296
Foreign currency translation differences			204,605	249,044
Loss on valuation of derivatives	21	-	(407)	(939)
Other comprehensive income, net of tax			354,202	647,724
Total comprehensive income		₩	962,017	1,488,029
·		-		
Profit attributable to:		w	540.715	726.419
Owners of the controlling company Non-controlling interests		**	67.100	113.886
· ·		-		
Profit		₩	607,815	840,305
Total comprehensive income attributable to :				
Owners of the controlling company		w	807.671	1.325.264
Non-controlling interests		•	154,348	162,765
Hori-controlling interess		-	104,040	102,700
Total comprehensive income		₩	982,017	1,488,029
Earnings per share (in Won)	32			
Basic earnings per share (in Won)			7,126	9,577
Diluted earnings per share (in Won)		₩	5,719	9,577
		-		

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 changes in equity for each of the three-month periods ended March 31, 2024 and 2023 (Unaudited)

(in millions of Won)	ı		Attributa	Attributable to owners of the controlling company	e controlling	company			
	l	Share capital	Capital surplus	Accumulated other comprehensive income (loss)	Treasury	Retained earnings	Subtotal	Non- 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		•	,	•	•	726,419	726,419	113,886	840,305
Other comprehensive income (loss) Remeasurements of defined benefit plans, net of tax		•	,	•	,	(16,043)	(16,043)	(13,271)	(29,314)
capital adjustement ansing north investments in subsidiaries under equity method, net of tax		•	•	224,434	•	•	224,434	6,588	231,022
at fair value through other comprehensive income, net of tax Eorgian currency translation differences not of tax		•	•	141,478	•	535	142,013	- 208	142,013
Loss on valuation of derivatives, net of tax	ı	 	' '	(603)	·	 	(603)	(336)	(939)
Total comprehensive income	ı	İ	'	614,353	•	710,911	1,325,264	162,765	1,488,029
Transactions with owners of the controlling company, recognized directly in equity: Year-end dividends Changes in ownership interest in subsidiaries			156,139	(12,480)		(151,698)	(151,698) 143,659	(77,109) (144,663)	(228,807) (1,004)
interest of nybrid borids Disposal of treasury shares Share based payments Others	ı		4,083 (9,087) 1,509	(308)	5,864	. (29,182)	9,947 (9,087) (27,981)	(4,007) - 19,248	(4,067) 9,947 (9,087) (8,733)
Total transactions with owners of the controlling company		<u>'</u>	152,644	(12,788)	5,864	(180,880)	(35,160)	(206,591)	(241,751)
Balance as of March 31, 2023 (Unaudited)	≱	482,403	1,553,476	157,575	(1,886,444)	53,495,210	53,802,220	5,701,459	59,503,679

(continued)

POSCO HOLDINGS INC. and its subsidiaries Interim condensed consolidated statements of changes in equity, continued

for each of the three-month periods ended March 31, 2024 and 2023 (Unaudited)

(in millions of Won)	ı		Attributa	Attributable to owners of the controlling company	ne controlling	company			
	ı	Share capital	Capital surplus	Accumulated other comprehensive income (loss)	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		•	•	•	•	540,715	540,715	67,100	607,815
Curer complements we meet to say. Remeasurements of defined benefit plans, net of tax		,	•	•	•	3,831	3,831	1,687	5,518
Capital adjustement arising from investments in subsidiaries under equity method, net of tax		•	•	51,114	•	•	51,114	27,071	78,185
Net changes in fair value of equity investments at fair value through other comprehensive income, net of tax		•	•	(10,413)	•	18,123	7,710	(62)	7,648
Foreign currency translation differences, net of tax		•	•	204,605	•	•	204,605	58,654	263,259
Loss on valuation of derivatives, net of tax	ı	·	•	(304)		İ	(304)	(103)	(407)
Total comprehensive income	ı	1		245,002		562,669	807,671	154,347	962,018
Transactions with owners of the controlling company, recognized directly in equity: Year-end dividends Change in equity-		•	•		•	(189,691)	(189,691)	(75,759)	(265,450)
Changes in ownership interest in subsidiaries Others			(8,897) 1,162	323		1,062	(8,897) 2,547	12,344 (2,194)	3,447 3,447 353
Total transactions with owners of the controlling company	I I		(7,735)	323		(188,629)	(196,041)	(33,104)	(229,145)
Balance as of March 31, 2024 (Unaudited)	≱	482,403	1,655,599	312,581	(1,889,658)	54,231,554	54,792,479	5,604,291	60,396,770

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

Interim condensed consolidated statements of cash flows for each of the three-month periods ended March 31, 2024 and 2023 (Unaudited)

(in millions of Won)	Notes		Three-month p March 31, 2024 (Unaudited)	eriod ended March 31, 2023 (Unaudited)
Cash flows from operating activities				
Profit		₩	607,815	840,305
Adjustments for:				
Depreciation			880,865	830,081
Amortization			122,641	122,791
Finance income			(1,065,156)	(1,145,674)
Finance costs			906,792	1,048,441
Income tax expense			124,696	160,952
Impairment loss on property, plant and equipment			40,631	· •
Gain on disposal of property, plant and equipment			(5,997)	(2,286)
Loss on disposal of property, plant and equipment			13,365	18,687
Impairment loss on goodwill and other intangible assets			11	11
Gain on disposal of investments				
in subsidiaries, associates and joint ventures			(18)	(184,656)
Loss on disposal of investments				
in subsidiaries, associates and joint ventures			20	4,384
Share of profit of subsidiaries under equity method			(77,818)	(113,799)
Loss on disposal of assets held for sale			31,222	102,470
Post-emplyment benefit expense			62,248	51,337
Impairment loss on trade and other receivables			26,265	10,925
Loss on valuation of inventories			164,239	132,378
Reversal of provisions			(16,364)	-
Others, net		_	(14,590)	(45,464)
		_	1,193,052	990,578
Changes in operating assets and liabilities	35		(1,326,171)	(1,557,108)
Interest received			173,249	80,221
Interest paid			(348,419)	(227,422)
Dividends received			153,228	84,488
Income taxes paid		_	(167,612)	(481,947)
Net cash provided by (used in) operating activities		₩_	285,142	(270,885)

(continued)

Interim condensed consolidated statements of cash flows, continued for each of the three-month periods ended March 31, 2024 and 2023 (Unaudited)

(in millions of Won)	Notes	March 31, 2024 (Unaudited)	March 31, 2023 (Unaudited)
Cash flows from investing activities			
Acquisitions of short-term financial instruments	₩	(4,459,494)	(29,316,847)
Proceeds from disposal of short-term financial instruments		4,797,564	27,629,441
Increase in loans		(296,521)	(245,917)
Collection of loans		256,327	291,315
Acquisitions of securities		(275,226)	(122,601)
Proceeds from disposal of securities		435,388	59,943
Acquisitions of long-term financial instruments		(3,437)	(593)
Acquisitions of investment			
in associates and joint ventures		(34,511)	(64,972)
Proceeds from disposal of			, , ,
investment in associates and joint ventures		1,800	379
Acquisitions of investment property		(1,516)	(146)
Proceeds from disposals of investment property		27	306
Acquisitions of property, plant and equipment		(1,843,327)	(1,353,532)
Proceeds from disposal of property, plant and equipment		702	750
Acquisitions of intangible assets		(77,683)	(98,958)
Proceeds from disposal of intangible assets		3,918	17,004
Collection of lease receivables		7,171	11,651
Cash flow from business combination		-	(150,201)
Others, net		(3,188)	(2,014)
Net cash used in investing activities		(1,492,006)	(3,344,992)
Cash flows from financing activities			
Proceeds from borrowings		1,251,862	3,999,922
Repayment of borrowings		(1,139,406)	(972,728)
Proceeds from (repayment of) short-term borrowings, net		1,167,241	(528,476)
Capital contribution from non-controlling interests		36,505	38,353
Payment of cash dividends		(734)	(384)
Payment of interest of hybrid bonds			(4,087)
Repayment of lease liabilities		(40,779)	(48, 161)
Others, net		71,008	22,107
Net cash provided by financing activities		1,345,697	2,506,546
Effect of exchange rate fluctuation on cash held		63,891	65,269
Net increase(decrease) in cash and cash equivalents		202,724	(1,044,062)
Cash and cash equivalents at beginning of the period		6,670,879	8,053,282
Cash and cash equivalents at end of the period	₩	6,873,603	7,009,220

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 53 domestic subsidiaries including POSCO INC. and 139 foreign subsidiaries including POSCO America Corporation, and 122 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 spin-off 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 March 31, 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 subsidiary acquired or newly established during the three-month period ended March 31, 2024 is as follows:

Company	Date of inclusion	Ownership (%)	Reason
POSCO CNGR Nickel Solution	January 2024	60.00	New establishment

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.

2. Basis of preparation (cont'd)

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.

(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.

Changes in Accounting Policies

Except for the standards and amendments applied for the first time for the reporting period commenced January 1, 2024 described below, the accounting policies applied by the Group in these consolidated financial statements are the same as those applied by the Group in its 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.

3. Summary of Material Accounting Policy information (cont'd)

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 March 31, 2024 and December 31, 2023 are as follows:

(in millions of Won)		March 31, 2024	December 31, 2023
Current	_		
Trade accounts and notes receivable	₩	10,154,501	9,382,640
Due from customers for contract work		1,792,859	1,916,238
Less: Allowance for doubtful accounts		(271,990)	(283,575)
	₩	11,675,370	11,015,303
Non-current			
Trade accounts and notes receivable	₩	126,899	89,839
Less: Allowance for doubtful accounts	_	(78,017)	(47,323)
	₩	48,882	42,516

Consolidated entities discounted accounts receivable in accordance with accounts receivable factoring agreements with financial institutions in three-month periods ended March 31, 2024 and in year ended December 31, 2023. This transaction is a transaction with the right to appeal because the consolidated entity 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 collateral borrowing. As of the three-month period ended March 31, 2024 and the year ended December 31, 2023, the book value of accounts receivable according to the transaction is \text{\text{\$\psi}116,640 million and \$\psi\$132,942 million, respectively, and the amount is included in the short-term borrowings.

5. Other Receivables

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

(in millions of Won)		March 31, 2024	December 31, 2023
Current			
Short-term Loans	₩	311,716	223,011
Other accounts receivable		1,411,071	1,433,423
Accrued income(* 1)		250,726	237,154
Deposits		136,538	125,854
Others		25,729	15,349
Lease receivables		24,262	23,948
Less: Allowance for doubtful accounts		(107,999)	(111,210)
	₩	2,052,043	1,947,529
Non-current			
Long-term Loans(* 1)	₩	1,314,133	1,204,645
Other accounts receivable		196,597	186,492
Accrued income		205,353	184,739
Deposits		295,042	308,185
Lease receivables		76,233	78,994
Less: Allowance for doubtful accounts		(534,934)	(510,610)
	₩	1,552,424	1,452,445

^(*1) The Company recognized a full provision for bad debt of \wxi258,332 million for other bonds to FQM Australia Holdings Pty Ltd., an affiliated company due to low possibility of collecting other bonds during the year ended December 31, 2023.

6. Other Financial Assets

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

(in millions of Won)		March 31, 2024	December 31, 2023
Current	_	_	
Derivatives assets	₩	195,920	166,873
Debt securities		297,403	295,619
Deposit instruments(* 1)		4,722,751	4,400,267
Short-term financial instruments(* 1)		5,988,969	6,540,407
	₩	11,205,043	11,403,166
Non-current	_	_	
Derivatives assets	₩	217,565	134,269
Equity securities(* 2)		1,855,239	1,793,531
Debt securities		89,544	87,778
Other securities(* 2)		722,418	669,687
Deposit instruments(* 1)		25,213	23,060
Long-term financial instruments		7	<u> </u>
	₩	2,909,986	2,708,325

- (*1) As of March 31, 2024 and December 31, 2023, financial instruments amounting to \w164,925 million and \w101,888 million, respectively, are restricted in use for financial arrangements, pledge and others.
- (*2) As of March 31, 2024 and December 31, 2023, \(\psi \)202,141 million and \(\psi \)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 March 31, 2024 and December 31, 2023 are as follows:

(in millions of Won)	_	March 31, 2024	December 31, 2023
Finished goods	₩	2,511,828	2,615,009
M erchandise		1,022,478	1,049,467
Semi-finished goods		2,834,190	3,039,516
Raw materials		3,418,105	3,237,691
Fuel and materials		949,262	921,742
Construction inventories		254,838	256,558
M aterials-in-transit		3,163,922	2,965,306
Others	_	97,931	87,802
	_	14,252,554	14,173,091
Less: Allowance for inventories valuation(* 1)	_	(277,512)	(347,577)
	₩_	13,975,042	13,825,514

(*1) In the three-month periods ended March 31, 2024 and the year ended March 31, 2023, the revamped inventory asset valuation losses are \text{\text{W73,505}} million and \text{\text{\text{W106,535}}} million, respectively.

8. Assets Held for Sale

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

(in millions of Won)		March 31, 2024	December 31, 2023 (* 1)
Asset			
Account receivables and other receivables	₩	-	728
Inventories		-	39,054
Other financial assets		-	119,881
Property, plant and equipment		5,336	149,612
Intangible assets		-	97,372
Others		-	298
	₩	5,336	406,945
Liability			
Other payables	₩	-	22,180
Provisions		<u>-</u>	119,710
	₩	-	141,890

(*1) POSCO Canada Ltd., a subsidiary of the consolidated entity 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 March 31, 2024 and December 31, 2023 are as follows:

(in millions of Won)	March 31, 2024								
•	Number	Ownership	1	Acquisition					
Company	of shares	(%)		cost	_	Book value	Book value		
[Domestic]									
Samcheok Blue Power Co.,Ltd.(* 1)	4,507,138	34.00	₩	455,584	₩	352,146	323,521		
SNNC	18,130,000	49.00		90,650		71,680	100,692		
Chun-cheon Energy Co., Ltd(* 1)	17,308,143	49.10		86,541		15,093	15,040		
Pocheon-Hwado Highway Corp.(* 1)	7,109,230	27.89		35,546		22,927	23,998		
CHUNGJU ENTERPRISE CITY									
DEVELOPMENT Co.,Ltd	1,181,160	29.53		5,906		13,928	13,967		
DaeSung SnM Co., Ltd									
(formerly, Daesung Steel)(* 2)	108,038	17.54		14,000		19,737	20,296		
PCC Amberstone Private Equity Fund 1(*2)	6,865,491,122	8.80		6,747		8,061	8,904		
Others (50 companies)(* 1)					_	125,110	122,366		
					_	628,682	628,784		
[Foreign]									
South-East Asia Gas Pipeline Company Ltd.	135,219,000	25.04		132,907		294,040	287,282		
AES Mong Duong Power									
Company Limited(* 1)	-	30.00		164,303		251,597	230,699		
9404-5515 Quebec Inc.	284,463,243	25.85		328,509		384,144	346,724		
AMCI (WA) PTY LTD	49	49.00		209,664		60,044	60,225		
NCR LLC	-	22.10		247,077		256,007	253,121		
KOREA LNG LTD.	2,400	20.00		135,205		62,420	58,759		
Nickel Mining Company SAS	3,234,698	49.00		157,585		82,193	87,967		
ZHEJIANG HUAYOU-POSCO ESM CO., LTD	648,530,000	40.00		120,072		107,218	105,300		
PT. Wampu Electric Power(* 1)	8,708,400	20.00		10,054		16,496	15,632		
POS-SeAH Steel Wire(Nantong) Co., Ltd.	50	25.00		4,723		9,102	8,642		
Others (32 companies)(* 1)						191,356	209,118		
						1,714,617	1,663,469		
					₩_	2,343,299	2,292,253		

- (*2) As of March 31, 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 March 31, 2024 and December 31, 2023 are as follows:

(in millions of Won)		December 31, 2023					
Company	Number of shares	Ownership (%)		Acquisition cost		Book value	Book value
[Domestic]							
POSCO MC MATERIALS	11,568,000	60.00	₩	115,680	₩	151,936	155,748
Others (6 companies)						8,846	8,323
						160,782	164,071
[Foreign]							
Roy Hill Holdings Pty Ltd(* 1)	13,117,972	12.50		1,528,672		1,345,654	1,400,009
POSCO-NPS Niobium LLC	325,050,000	50.00		364,609		437,852	419,192
KOBRASCO	2,010,719,185	50.00		32,950		103,306	99,768
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.	-	25.00		61,961		118,995	111,001
DM SA/AM SA(* 1)	-	3.89		346,880		11,567	16,572
PT NICOLE METAL INDUSTRY(* 2)	76,382,353	49.00		292,780		292,984	284,351
HBIS-POSCO Automotive Steel Co.Ltd	-	50.00		235,251		207,689	208,765
Others (9 companies)						27,254	24,282
						2,545,301	2,563,940
					₩	2,706,083	2,728,011
					_		

^(*1) As of March 31, 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 \u20fc22,780 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 three-month period ended March 31, 2024 and the year ended December 31, 2023 are as follows:
 - 1) For the three-month period ended March 31, 2024

(in millions of Won)							
Company		December 31, 2023 Book value	Acquisition	Dividends	Share of profits (losses)	Other increase (decrease)(*1)	March 31, 2024 Book value
[Domestic]							
Samcheok Blue Power Co.,Ltd.	₩	323,521	25,680	(2,471)	5,416	-	352,146
SNNC		100,692	-	-	(29,012)	-	71,680
Chun-cheon Energy Co., Ltd		15,040	-		(365)	418	15,093
Pocheon-Hwado Highway Corp.		23,998	-		(1,071)		22,927
CHUNGJU ENTERPRISE CITY					(/- /		
DEVELOPMENT Co.,Ltd		13,967	-	-	(38)	-	13,928
DaeSung SnM Co., Ltd					, ,		
(formerly, Daesung Steel)		20,296	-	-	(559)	-	19,737
PCC Amberstone Private Equity Fund 1		8,904	-	-	(71)	(772)	8,061
POSCO MC MATERIALS		155,748	-	-	(3,812)	-	151,936
Others (56 companies)		130,689	2,755	(1,645)	3,247	(1,091)	133,956
, ,	-	792,855	28,435	(4,116)	(26,265)	(1,445)	789,464
[Foreign]	-			(, - ,			
South-East Asia Gas Pipeline Company Ltd.		287.282	-	(15,015)	9.020	12.753	294.040
AES Mong Duong Power Company Limited		230,699	-	-	10,121	10,777	251,597
9404-5515 Quebec Inc.		346,724	-	-	17,186	20,234	384,144
AMCI (WA) PTY LTD		60,225	-	-	(909)	728	60,044
NCR LLC		253,121	-	-	360	2,526	256,007
KOREA LNG LTD.		58,759	-	(4,790)	4,734	3,717	62,420
Nickel Mining Company SAS		87,967	-		(7,641)	1,867	82,193
ZHEJIANG HUAYOU-POSCO ESM CO., LTD		105,300	-	-	(940)	2,858	107,218
PT. Wampu Electric Power		15,632	-	-	196	668	16,496
POS-SeAH Steel Wire(Nantong) CO., Ltd.		8,642	-	-	108	352	9,102
Roy Hill Holdings Pty Ltd		1,400,009	-	(114,870)	58,800	1,715	1,345,654
POSCO-NPS Niobium LLC		419,192	-	(8,041)	7,935	18,766	437,852
KOBRASCO		99,768	-	-	2,488	1,050	103,306
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.		111,001	-	-	5,129	2,865	118,995
DMSA/AMSA		16,572	-	-	(5,663)	658	11,567
PT NICOLE METAL INDUSTRY		284,351	-	-	(89)	8,722	292,984
HBIS-POSCO Automotive Steel Co.Ltd		208,765	-	.	(6,782)	5,706	207,689
Others (41 companies)	-	233,400	2,343	(9,144)	10,030	(18,020)	218,610
		4,227,409	2,343	(151,860)	104,083	77,942	4,259,918
	₩	5,020,264	30,778	(155,976)	77,818	76,497	5,049,382

(*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 three-month period ended March 31, 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
DM SA/AM SA PT NICOLE METAL INDUSTRY		23,740	-	-	(7,681)	513	16,572
HBIS-POSCO Automotive Steel Co.Ltd		216,138	292,780	-	39 (6,765)	(8,468) (608)	284,351 208,765
Others (37 companies)		255.004	-	(52,444)	(6,765)	(7,621)	233,400
Others (37 companies)	_	3,972,163	373,962	(634,404)	363,710	151,978	4,227,409
	₩	4,996,551	391.037	(658,338)	269,678	21,336	5,020,264
	** _	7,000,001	391,037	(050,550)	209,078	21,330	3,020,204

- (*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) Summarized financial information of associates and joint ventures as of and for the three-month period ended March 31, 2024 and the year ended December 31, 2023 are as follows:

1) March 31, 2024

(in millions of Won)

Company		Assets	Liabilities	Equity (deficit)	Sales	Net income (loss)	
[Domestic]		Assets	Liabilities	(deficit)	Jaies	(1033)	
Samcheok Blue Power Co.,Ltd.	₩	4,451,021	3,817,568	633,453	173,846	20,542	
SNNC		614,608	449,922	164,686	139,497	(59,591)	
Chun-cheon Energy Co., Ltd		589,531	468,784	120,747	110,330	2,642	
Pocheon-Hwado Highway Corp.		750,142	628,854	121,288	2,234	260	
CHUNGJU ENTERPRISE CITY							
DEVELOPMENT Co.,Ltd		19,739	2,872	16,867	-	(130)	
DaeSung SnM Co., Ltd		180,093	98,959	81,134	20,215	(3,188)	
PCC Amberstone Private Equity Fund 1		96,249	4,603	91,646	5	(805)	
POSCO MC MATERIALS		383,505	128,386	255,119	44,760	(5,453)	
[Foreign]							
South-East Asia Gas Pipeline Company Ltd.		1,838,833	664,562	1,174,271	95,289	36,019	
AES Mong Duong Power Company Limited		1,739,481	946,450	793,031	124,068	33,736	
9404-5515 Quebec Inc.		1,561,385	-	1,561,385	-	66,471	
FQM Australia Holdings Pty Ltd		187,585	1,298,686	(1,111,101)	52,225	(162,369)	
KOREA LNG LTD.		312,194	92	312,102	24,240	23,671	
Nickel Mining Company SAS		500,388	271,331	229,057	41,298	(23,162)	
ZHEJIANG HUAYOU-POSCO ESM CO., LTD		326,628	58,076	268,552	27,597	(2,350)	
PT. Wampu Electric Power		205,171	125,712	79,459	2,907	981	
POS-SeAH Steel Wire(Nantong) Co., Ltd.		84,375	49,169	35,206	27,360	444	
Roy Hill Holdings Pty Ltd		10,447,683	2,871,895	7,575,788	1,793,097	568,277	
POSCO-NPS Niobium LLC		875,502	-	875,502	-	15,659	
KOBRASCO		233,199	27,193	206,006	24,291	15,252	
BX STEEL POSCO Cold Rolled Sheet Co., Ltd.		726,076	276,960	449,116	474,574	20,515	
DMSA/AMSA		3,123,331	2,826,044	297,287	184,731	(145,610)	
HBIS-POSCO Automotive Steel Co.Ltd		877,556	452,955	424,601	119,560	(15,006)	
PT NICOLE METAL INDUSTRY		406,454	2,578	403,876	-	(182)	

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

2) December 31, 2023

(in millions of Won)

(III IIIIIIIOIIS OI VVOII)				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
DM SA/AM SA		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 March 31, 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
POSM AC J/V	Mine development	20.00	Australia
Samcheok Thermal Power Plant EPC			
(Unit 1, 2) construction work	Construction	49.00	Korea
Sinansan Line Double Track Train Private			
Investment project construction work	Construction	36.00	Korea
Panama Metro Line 3 Project			
construction work	Construction	20.00	Panama
2*600 MW Matarbari Ultra Super Critical			
Coal-Fired Power construction work	Construction	67.00	Bangladesh
Yongmun 123 Construction work			
Reconstruction Maintenance Project	Construction	70.00	Korea
Songdo B5 Block officetel Project			
Construction work	Construction	80.00	Korea
Jeonju Seosin-dong Housing			
Redevelopment Project	Construction	70.00	Korea
Anyang Jinheung Apartment			
Construction work	Construction	45.00	Korea

11. Investment Property

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

(a) For the three-month period ended March 31, 2024

				Impairment				
(in millions of Won)	_	Beginning	Acquisitions	Disposals	Depreciation	loss	Others(* 1)	Ending
Land	₩	787,304	1,710	-	-	(215)	33,512	822,311
Buildings		655,786	1,506	-	(6,812)	(456)	(60,512)	589,512
Structures		1,873	-	-	(228)	-	185	1,830
Right-of-use assets		171,331	-	(27)	(11,679)	-	5,806	165,431
	₩	1,616,294	3,216	(27)	(18,719)	(671)	(21,009)	1,579,084

(*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)				Business				
(III IIIIIIIOIIS OI VVOII)	-	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 three-month period ended March 31, 2024 and the year ended December 31, 2023 are as follows:
 - 1) For the three-month period ended March 31, 2024

						Impairment		
(in millions of Won)		Beginning	Acquisitions	Disposals	Depreciation	loss	Others(* 1)	Ending
Land	₩	3,290,244	398	-	-	-	(10,653)	3,279,989
Buildings		4,427,632	3,139	(151)	(82,993)	(35)	133,387	4,480,979
Structures		3,081,524	472	(1,162)	(69,327)	(2,488)	250,904	3,259,923
Machinery and equipment		16,539,192	33,132	(2,872)	(591,975)	(38,108)	793,687	16,733,056
Vehicles		79,595	3,397	(452)	(7,530)	-	1,287	76,297
Tools		128,865	10,055	(183)	(13,784)	-	5,933	130,886
Furniture and fixtures		189,887	7,855	(512)	(14,175)	-	4,569	187,624
Right-of-use assets		998,305	46,597	(2,028)	(79,992)	-	104,763	1,067,645
Bearer plants		137,331	-	-	(2,370)	-	2,135	137,096
Construction-in-progress		6,333,673	1,940,033	(401)	-		(955,932)	7,317,373
	₩	35,206,248	2,045,078	(7,761)	(862,146)	(40,631)	330,080	36,670,868

(*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)		Beginning	Acquisitions	Business Combination(* 2)	Disposals	Depreciation	Impairment loss(* 3,4)	Others(* 1)	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 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) 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.
- (*3) The consolidated entity calculated the net fair value for individual assets that were suspended due to some changes in operation plans, such as lithium production facilities in Gwangyang and Argentina, and recognized an impairment loss of \text{\psi}196,207 million for property, plant and equipment whose recoverable amount was less than the book value during the year ended December 31, 2023.
- (*4) The consolidated entity calculated the value of use for the hydrogen peroxide manufacturing facility in Gwangyang, which had signs of damage 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 W46,535 million for property, plant and equipment whose recoverable amount was less than the book value.

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 three-month period ended March 31, 2024 and the year ended December 31, 2023 are as follows:
 - 1) For the three-month period ended March 31, 2024

(in millions of Won)	_	Beginning	Acquisitions	Depreciation	Others	Ending
Land	₩	363,789	638	(10,737)	(27,099)	326,591
Buildings and structures		151,366	29,346	(8,598)	65,383	237,497
Machinery and equipment		355,604	10,415	(58,156)	78,957	386,820
Vehicles		48,228	5,212	(4,552)	(4)	48,884
Ships		220,754	-	(6,470)	-	214,284
Others	_	29,895	986	(3,158)	(8,722)	19,001
	₩	1,169,636	46,597	(91,671)	108,515	1,233,077

2) For the year ended December 31, 2023

(in millions of Won)	_	Beginning	Acquisitions	Depreciation	Others	Ending
Land	₩	368,167	10,470	(15,582)	734	363,789
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 periods ended March 31, 2024 and 2023 are as follows:

(in millions of Won)	<u> </u>	March 31, 2024	March 31, 2023
Interest on lease liabilities	₩	12,346	9,307
Expenses related to short-term leases		18,935	7,481
Expenses related to leases of low-value assets		6,656	5,353
	₩	37,937	22,141

13. Goodwill and Other Intangible Assets

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

(a) For the three-month period ended March 31, 2024

(in millions of Won)						Impairment		
	_	Beginning	Acquisitions	Disposals	Amortization	loss	Others(* 2)	Ending
Goodwill	₩	403,172	-	-	-	-	145	403,317
Intellectual property rights		3,029,651	80,971	-	(75,073)	-	18,981	3,054,530
Membership(* 1)		138,184	944	(777)	(41)	(11)	126	138,425
Development expense		126,818	1,428	-	(18,810)	-	1,658	111,094
Port facilities usage rights		182,411	-	-	(3,700)	-	-	178,711
Exploratation and evaluation assets		163,446	7,231	-	-	-	4,304	174,981
Development assets		10,235	223	-	-	-	(31)	10,427
Customer relationships		196,895	-	-	(11,120)	-	(45)	185,730
Other intangible assets		463,972	22,393	(176)	(13,897)	-	(7,134)	465,158
	₩	4,714,784	113,190	(953)	(122,641)	(11)	18,004	4,722,373

- (*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)						Impairment		
	_	Beginning	Acquisitions	Disposals	Amortization	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 W88,518 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 March 31, 2024 and December 31, 2023 are as follows:

(in millions of Won)	_	March 31, 2024	December 31, 2023
Current			
Advance payments	₩	518,764	593,300
Prepaid expenses		359,672	226,960
Firm commitment asset		11,614	3,418
Others		17,762	17,306
	₩	907,812	840,984
Non-current	_	<u> </u>	
Long-term advance payments	₩	30,972	46,989
Long-term prepaid expenses		27,794	30,232
Others		100,402	95,974
	₩	159,168	173,195

15. Borrowings

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

(in millions of Won)							
	Lenders	Issuance date	Maturity date	Interest rate (%)		March 31, 2024	December 31, 2023
Short-term borrowings	•			· ·			
Bank overdrafts	JP Morgan and others	April, 2023~	April, 2024~				
		March, 2024	December, 2024	3.65 ~ 7.55	₩	67,338	69,160
Short-term borrowings	HSBC and others	April, 2023~	April, 2024~				
		March, 2024	March, 2025	0.10 ~ 58.85	_	6,186,323	4,890,120
						6,253,661	4,959,280
Current portion of long-term liabilities					_		
Current portion of long-term borrowings	Export-Import Bank of	September, 2001~	April, 2024~				
	Korea and others	March, 2024	December, 2024	0.25 ~ 9.15		1,067,318	990,088
Current portion of debentures	KB Securities co.,Ltd. and	April, 2019~	January, 2024~				
	others	October, 2021	October, 2024	1.64 ~ 2.75		3,381,552	3,255,375
Less: Current portion of							
discount on debentures issued						(3,081)	(2,217)
Current portion of exchangable bonds(* 1)	Foreign currency exchangable bonds	September, 2021	September, 2026		_	1,642,466	1,756,691
					_	6,088,255	5,999,937
					₩	12,341,916	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.

15. Borrowings (cont'd)

	Foreign currency exchangable bonds
Type of bond	Exchangable bonds
Aggregate principal amount	EUR 1,065,900,000
Interest rate	- Coupon rate : Yield to Maturity : (0.78%)
Maturity date	September 1, 2026
Redemption	 Redemption at Maturity: Outstanding bond principal, which is not repaid early or which call option is not exercised on, is repaid at maturity as a lump sum Prepayment: The issuer has call option and the bondholders have put option
Exchange rate	100%
Exchange price (Won/share)	446,504(*)
Underlying shares exchange	Registered common shares(treasury shares)
Exchange period	From October 12, 2021 to August 22, 2026
Adjustments for exchange price	Adjusting the exchange price according to the terms and conditions of the bond in the events of reason for adjusting the exchange price such as, bonus issue, share split, share consolidation, change of share type, issuance of options or warranties to shareholders, share dividend, cash dividend, issuance of new shares under the market price.
Put option by bondholders	 3 years(September 1, 2024) from the closing date In the event of a change of control of the Company Where the shares issued by the Company are delisted (or suspended for more than 30 consecutive trading days)
Call option by the Issuer	 Share price(based on closing price) is higher than 130% of exchange price for more than 20 trading days during 30 consecutive trading days in a row, after 3 years (September 1, 2024) from the closing day to 30 business days before the maturity of bonds. When the outstanding balance of outstanding bonds is less than 10% of the total issuance(Clean-Up Call) Where additional reasons for tax burden arise due to the amendment of relevant laws and regulations, etc.

(*) The exchange price has changed due to cash dividends paid during the three-month period ended March 31, 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.

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

(in millions or vvon)							
	Lenders	Issuance date	Maturity date	Interest rate (%)		March 31, 2024	December 31, 2023
Long-term borrowings	Export-Import Bank of	September, 2001~	May, 2025~				
	Korea and others	March, 2024	March, 2040	0.10 ~ 9.16	₩	4,989,914	4,590,541
Less: Present value discount						(7,663)	(9,414)
Bonds	KB Securities co.,Ltd. and	July, 2015~	April, 2025~				
	others	March, 2024	January, 2033	1.68 ~ 6.82		10,474,868	10,478,394
Less: Discount on debentures issued					_	(53,723)	(48,359)
					₩	15,403,396	15,011,162

(c) Assets pledged as collateral with regard to the borrowings as of March 31, 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	₩	4,424,563	8,056,242
Trade accounts and notes receivable	Korea Development Bank			
	and others		116,640	116,640
Financial instruments	Shinhan Bank and others		73,364	73,279
		₩	4,614,567	8,246,161

16. Other Payables

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

(in millions of Won)	_	March 31, 2024	December 31, 2023
Current			
Accounts payable	₩	1,282,463	1,174,097
Accrued expenses		1,230,017	1,046,891
Dividend payable		267,976	3,261
Lease liabilities		166,556	163,952
Withholdings		355,328	349,277
	₩ _	3,302,340	2,737,478
Non-current			
Accounts payable	₩	8,545	14,143
Accrued expenses		8,133	8,073
Lease liabilities		753,656	760,368
Long-term withholdings		81,236	90,981
	₩ _	851,570	873,565

17. Other Financial Liabilities

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

(in millions of Won)	_	March 31, 2024	December 31, 2023
Current			
Derivative liabilities	₩	48,934	38,631
Financial guarantee liabilities		4,302	5,114
Others(* 1)		125,190	119,881
	₩	178,426	163,626
Non-current	_		
Derivative liabilities	₩	11,854	81,291
Financial guarantee liabilities		7,346	7,858
Others		64,634	64,633
	₩ _	83,834	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 March 31, 2024 and December 31, 2023 are as follows:

(in millions of Won)		March 3	31, 2024	December 31, 2023		
		Current	Non-current	Current	Non-current	
Provision for bonus payments	₩	79,642	38,967	146,277	38,114	
Provision for construction warranties		47,556	142,810	50,222	146,536	
Provision for legal contingencies and claims(*1)		21,210	50,456	20,893	52,169	
Provision for the restoration(* 2)		6,834	178,254	14,567	161,253	
Others(* 3,4,5)		202,745	69,977	187,785	69,937	
7	₩	357,987	480,464	419,744	468,009	

- (*1) The Group recognized probable outflow of resources amounting to \(\pm\)37,918 million and \(\pm\)45,712 million as provisions for legal contingencies and asserted claim in relation to lawsuits against the Group as of March 31, 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 \text{W15,049} million as provisions for restoration as of March 31, 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 3.69%~3.72% to measure present value of these costs.
- (*3) As of March 31, 2024 and December 31, 2023, POSCO INTERNATIONAL Corporation and Korea Fuel Cell, recognized \(\psi 22,732\) million and \(\psi 23,224\) 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 March 31, 2024 and December 31, 2023, the Group has recognized emission liabilities amounting to \w9,065 million, 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 March 31, 2024 and December 31, 2023, the Group recognized \(\foat \text{93,150}\) million and \(\foat \text{464,166}\) million respectively, as provision.

18. Provisions (cont'd)

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

(in millions of Won)		Beginning	Increase	Utilization	Reversal	Others(* 1)	Ending
Provision for bonus payments	₩	184,391	49,423	(111,831)	(3,350)	(24)	118,609
Provision for construction warranties		196,758	12,671	(9,512)	(4,187)	(5,364)	190,366
Provision for legal contingencies and claims		73,062	3,085	(941)	(4,667)	1,127	71,666
Provision for the restoration		175,820	7,534	(851)	(1,694)	4,279	185,088
Others		257,722	171,523	(16,068)	(172,930)	32,475	272,722
	₩	887,753	244,236	(139,203)	(186,828)	32,493	838,451

^(*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 periods ended March 31, 2024 and 2023 are as follows:

(in millions of Won)		March 31, 2024	March 31, 2023	
Expense related to post-employment benefit plans				
under defined contribution plans	₩	18,669	18,211	

(b) Defined benefit plans

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

(in millions of Won)	_	March 31, 2024	December 31, 2023
Present value of funded obligations	₩	2,412,498	2,445,797
Fair value of plan assets(* 1)		(2,842,586)	(2,902,714)
Present value of non-funded obligations		12,044	30,912
Net defined benefit liabilities	₩	(418,044)	(426,005)

- (*1) As of March 31, 2024 and December 31, 2023, the Group recognized net defined benefit assets amounting to W486,152 million and W464,758 million, respectively, since there are consolidated entities whose fair value of plan assets exceeded the present value of defined benefit obligations.
- 2) The amounts recognized in interim condensed consolidated statements of comprehensive income for each of the three-month periods ended March 31, 2024 and 2023 are as follows:

(in millions of Won)		March 31, 2024	March 31, 2023
Current service costs	₩.	67,822	59,112
Net interest costs		(5,574)	(7,775)
	₩	62,248	51,337

20. Other Liabilities

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

(in millions of Won)	_	March 31, 2024	December 31, 2023
Current			
Due to customers for contract work	₩	550,077	624,632
Advances received		347,261	304,441
Unearned revenue		69,289	69,062
Withholdings		295,668	297,442
Firm commitment liability		9,072	20,136
Others(* 1)		20,630	21,929
	₩ _	1,291,997	1,337,642
Non-current	_		
Unearned revenue	₩	3,747	8,889
Others(* 1)		104,183	105,583
	₩	107,930	114,472

^(*1) As of March 31, 2024 and December 31, 2023, the Group recognized the assumed liability amounting to \wsetmath{\psi}52,646 million and \wsetmath{\psi}56,325 million, respectively related to unfavorable terms of a customer contract relative to market-terms upon the acquisition of Senex Energy Limited.

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 March 31, 2024 and December 31, 2023 are as follows:
 - ① March 31, 2024

(in millions of Won)				Fair val	value		
		Book value	Level 1	Level 2	Level 3	Total	
Financial assets							
Fair value through profit or loss							
Derivative assets	₩	408,179	-	408,179	-	408,179	
Short-term financial instruments		5,988,969	-	5,988,969	-	5,988,969	
Equity securities		85,108	55,246		29,862	85,108	
Debt securities		91,665	-	76,051	15,614	91,665	
Other securities		722,418	-	270	722,148	722,418	
Derivative hedging instruments(* 2)		5,306	-	5,306	-	5,306	
Fair value through other comprehensive income							
Equity securities		1,770,131	1,346,495	-	423,636	1,770,131	
Financial assets measured at amortized cost(* 1)							
Cash and cash equivalents		6,873,603	-	-	-	-	
Trade accounts and notes receivable		9,945,751	-	-	-	-	
Other receivables		3,002,530	-	-	-	-	
Debt securities		295,282	-			-	
Deposit instruments		4,747,964	-	<u> </u>	<u> </u>	-	
↓	₩	33,936,906	1,401,741	6,478,775	1,191,260	9,071,776	
Financial liabilities							
Fair value through profit or loss							
Derivative liabilities	₩	49,347	-	49,347		49,347	
Borrowings		1,642,466	1,642,466	-	-	1,642,466	
Other financial Liabilities		189,823	-		189,823	189,823	
Derivative hedging instruments(* 2)		11,442	-	11,442		11,442	
Financial liabilities measured at amortized cost(*1)							
Trade accounts and notes payable		5,383,455	-	-		-	
Borrowings		26,102,846	-	25,663,278	-	25,663,278	
Financial guarantee liabilities		11,648		-	-	-	
Others		3,745,485	<u>-</u>		<u>-</u>	-	
+	₩	37,136,512	1,642,466	25,724,067	189,823	27,556,356	

- (*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 v	/alue	
		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	-	<u> </u>	<u>-</u>	-
	₩	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		24,213,689		24,310,166	-	24,310,166
Financial guarantee liabilities		12,972		-	-	
Others		3,241,459	-	-		-
Other financial Liabilities	_	65,256	<u>-</u>	<u> </u>		-
	₩	35,312,072	1,756,691	24,430,088	119,258	26,306,037
	_					<u> </u>

- (*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 three-month periods ended March 31, 2024 and 2023 are as follows:
 - ① For the three-month period ended March 31, 2024

(in millions of Won)				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 Derivative assets Financial assets at fair value	₩	-	72,433 154,550	-	12,393 (42,116)	92	84,918 112,434	-
through other comprehensive income Financial assets measured at		-	-	-	-	18,118	18,118	7,648
amortized cost Financial liabilities at fair value		172,436	-	340,296	(17,429)	(34)	495,269	-
through profit or loss		-	144,001	(32,435)	-		111,566	-
Derivative liabilities Financial liabilities measured at		-	98,899	-	59,745	-	158,644	(407)
amortized cost		(246,801)		(552,891)	-	(5,138)	(804,830)	-
	W.	(74,365)	469,883	(245,030)	12,593	13,038	176,119	7,241

21. Financial Instruments (cont'd)

② For the three-month period ended March 31, 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	₩						400.005		
through profit or loss		2,069	316,923	-	80,787	286	400,065		
Derivative assets		-	252,443	-	30,226	-	282,669	-	
Financial assets at fair value									
through other comprehensive income		-	-	-	-	16,840	16,840	142,013	
Financial assets measured at									
amortized cost		102,222	-	377,909	(18,703)	1,014	462,442	-	
Financial liabilities at fair value									
through profit or loss		-	(72,632)	(74,481)	-	-	(147,113)	-	
Derivative liabilities		-	(59,217)	-	(53,062)	-	(112,279)	(939)	
Financial liabilities measured at									
amortized cost		(244,560)	-	(540,933)		(6,423)	(791,916)		
	₩	(140,269)	437,517	(237,505)	39,248	11,717	110,708	141,074	

(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 March 31, 2024 and December 31, 2023 is as follows:

(Share, in Won)		March 31, 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 March 31, 2024, total number of American depository receipts (ADRs) outstanding in overseas stock market amounts to 20,307,420 and such ADRs are equivalent to 5,076,855 shares of common stock.
- (*2) As of March 31, 2024, the difference between the ending balance of common stock and the aggregate par value of issued common stock is \wxi>59,547 million due to retirement of 11,909,395 treasury stocks.
- (b) Capital surplus as of March 31, 2024 and December 31, 2023 are as follows:

(in millions of Won)	_	March 31, 2024	December 31, 2023
Share premium	₩	463,825	463,825
Gain on disposal of treasury shares		808,994	808,994
Other capital surplus		382,780	390,515
	₩	1,655,599	1,663,334

23. Accumulated Other Comprehensive Income

Details of accumulated other comprehensive income as of March 31, 2024 and December 31, 2023 are as follows:

(in millions of Won)	_	March 31, 2024	December 31, 2023
Accumulated comprehensive loss of investments in associates and joint ventures	₩	(129,850)	(180,964)
Changes in fair value of equity investments at fair value through other comprehensive income		142,866	153,279
Foreign currency translation differences		299,211	94,605
Gains or losses on valuation of derivatives		(948)	(644)
Others	_	1,302	980
	₩	312,581	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 three-month period ended March 31, 2024 and the year ended December 31, 2023 are as follows:

(shares, in millions of Won)	March	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

Details of revenue disaggregated by types of revenue and timing of revenue recognition for each of the three-month periods ended March 31, 2024 and 2023 are as follows:

1) March 31, 2024

(in millions of Won)			Green Infrastructure					
	_	Steel	Trading	Construction	Logistics and others	Green Materials and Energy	Others	Total
Types of revenue								
Revenue from sales of goods	₩	9,591,149	4,632,333		3,526	897,391		15,124,399
Revenue from services		235,862	699,574	25,258	83,633	1,877	3,890	1,050,094
Revenue from construction contract				1,813,979		7,092		1,821,071
Others		33,765	1,861	3,638	10,410		6,712	56,386
	₩_	9,860,776	5,333,768	1,842,875	97,569	906,360	10,602	18,051,950
Timing of revenue recognition								
Revenue recognized at a point in time	₩	9,624,914	4,634,194	12,079	13,936	897,391	6,712	15,189,226
Revenue recognized over time	_	235,862	699,574	1,830,796	83,633	8,969	3,890	2,862,724
	₩	9,860,776	5,333,768	1,842,875	97,569	906,360	10,602	18,051,950

2) March 31, 2023

(in millions of Won)				Green Infrastructure				
	_	Steel	Trading	Construction	Logistics and others	Green Materials and Energy	Others	Total
Types of revenue								
Revenue from sales of goods	₩	10,095,108	4,835,208		9,298	899,086		15,838,700
Revenue from services		194,662	1,061,987	38,476	51,326	1,615	6,515	1,354,581
Revenue from construction contract			-	1,923,329		15,451		1,938,780
Others	_	40,708	156,084	1,803	16,387		33,835	248,817
	₩	10,330,478	6,053,279	1,963,608	77,011	916,152	40,350	19,380,878
Timing of revenue recognition	_							
Revenue recognized at a point in time	₩	10,135,816	4,991,291	9,471	25,718	899,086	33,835	16,095,217
Revenue recognized over time	_	194,662	1,061,988	1,954,137	51,293	17,066	6,515	3,285,661
	₩	10,330,478	6,053,279	1,963,608	77,011	916,152	40,350	19,380,878

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

(in millions of Won)	_	March 31, 2024	December 31, 2023
Receivables			
Account receivables	₩	9,945,840	9,155,853
Contract assets			
Due from customers for contract work		1,778,412	1,901,966
Contract liabilities			
Advance received		350,309	309,441
Due to customers for contract work		550,077	624,632
Unearned revenue		72,967	77,908

26. Contract under Input Method

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

(in millions of Won)		March 31, 2	2024	December 31, 2023		
		Construction segment	Others	Construction segment	Others	
Accumulated cost	₩	26,139,685	383,750	28,663,723	272,321	
Accumulated contract profit		1,982,653	41,138	2,499,061	36,954	
Accumulated contract loss		(563,840)	(18,123)	(688,962)	(8,916)	
Accumulated contract revenue		27,558,498	406,765	30,473,822	300,359	

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

(in millions of Won)	_	March 31,	2024	December 31, 2023		
	· <u>-</u>	Construction		Construction		
	_	segment	Others	segment	Others	
Due from customers for contract	₩	1,764,601	28,258	1,873,681	42,557	
Due to customers for contract work	_	(536,995)	(13,082)	(608,339)	(16,293)	
	₩	1,227,606	15,176	1,265,342	26,264	

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

(in millions of Won)		March 31, 2024	December 31, 2023
Construction segment	₩	41,880	48,825
Others		981	1,749
	₩	42,861	50,574

(d) For the three-month period ended March 31, 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)		Changes in profit (loss) of contract				tract
	. <u>-</u>	Changes in total contract revenues	Changes in estimated total contract costs	Net income	Future income	Total
Construction segment	₩	11,841	35,144	(23,066)	(237)	(23,303)
Others		77,073	51,167	21,776	4,130	25,906
	₩ _	88,914	86,311	(1,290)	3,893	2,603

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 March 31, 2024 and the estimated total contract revenue as of March 31, 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

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

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

27. Selling and Administrative Expenses

(a) Other administrative expenses

Other administrative expenses for each of the three-month periods ended March 31, 2024 and 2023 are as follows:

(in millions of Won)	_	March 31, 2024	March 31, 2023
Wages and salaries	₩	303,851	284,774
Expenses related to post-employment benefits		23,844	26,624
Other employee benefits		77,529	62,608
Travel		10,377	9,527
Depreciation		40,830	38,865
Amortization		27,213	22,523
Communication		3,890	2,700
Electricity		3,673	2,794
Taxes and public dues		15,237	15,182
Rental		4,765	11,318
Repairs		3,468	2,577
Entertainment		3,993	3,934
Advertising		20,352	21,077
Research & development		49,345	36,144
Service fees		53,347	36,601
Vehicles maintenance		2,008	1,922
Industry association fee		2,321	3,397
Conference		4,817	5,205
Others		16,849	14,226
Bad debt expenses		17,739	3,430
	₩	685,448	605,428

(b) Selling expenses

Selling expenses for each of the three-month periods ended March 31, 2024 and 2023 are as follows:

(in millions of Won)	_	March 31, 2024	March 31, 2023
Freight and custody expenses	₩	6,080	15,843
Operating expenses for distribution center		265	740
Sales commissions		22,054	22,421
Sales advertising		200	737
Sales promotion		2,743	3,254
Sample		567	499
Sales insurance premium		8,239	8,548
Contract cost		17,866	7,331
Others		2,349	3,932
	₩ _	60,363	63,305

28. Finance Income and Costs

Details of finance income and costs for each of the three-month periods ended March 31, 2024 and 2023 are as follows:

(in millions of Won)		March 31, 2024	March 31, 2023
Finance income			
Interest income(* 1)	₩	172,436	104,291
Dividend income		18,210	17,126
Gain on foreign currency transactions		304,843	480,378
Gain on foreign currency translations		302,527	333,156
Gain on derivatives transactions		78,174	58,351
Gain on valuations of derivatives		300,348	268,938
Gain on disposal of financial assets at fair value			
through profit or loss		25,287	86,923
Gain on valuation of financial assets at fair value			
through profit or loss		85,306	328,463
Gain on valuation of financial liabilities at fair value			
through profit or loss		144,001	-
Others		3,169	5,924
1	₩	1,434,301	1,683,550
Finance costs		_	
Interest expenses	₩	246,801	244,560
Loss on foreign currency transactions		266,068	436,378
Loss on foreign currency translations		586,332	614,661
Loss on derivatives transactions		60,545	81,187
Loss on valuation of derivatives		46,899	75,712
Loss on disposal of trade accounts and notes receivable		17,429	18,703
Loss on disposal of financial assets at fair value			
through profit or loss		12,894	6,136
Loss on valuation of financial assets at fair value			
through profit or loss		12,873	11,540
Loss on valuation of financial liabilities at fair value			
through profit or loss		-	72,632
Others		8,341	11,333
y	₩	1,258,182	1,572,842

^(*1) Interest income calculated using the effective interest method for each of the three-month periods ended March 31, 2024 and 2023 amounts to \wideta172,436 million and \wideta102,222 million, respectively.

29. Other Non-Operating Income and Expenses

Details of other non-operating income and expenses for each of the three-month periods ended March 31, 2024 and 2023 are as follows:

(in millions of Won)	illions of Won)		March 31, 2023
Other non-operating income			
Recovery of other bad debt expenses	₩	2,322	324
Gain on disposals of investment			
in subsidiaries, associates and joint ventures(* 1)		18	184,656
Gain on disposals of property, plant and equipment		5,997	2,286
Gain on valuation of firm commitment		13,447	8,536
Reversal of other provisions		2,459	8,302
Premium income		296	7,281
Gain on bargain purchase(* 1)		-	32,965
Gain on disposals of emission rights		2,970	-
Others		29,920	32,736
	₩	57,429	277,086
Other non-operating expenses			
Other bad debt expenses	₩	10,847	7,820
Loss on disposals of assets held for sale(* 2)		31,222	102,470
Loss on disposals of investments			
in subsidiaries, associates and joint ventures		20	4,384
Loss on disposals of property, plant and equipment		13,365	18,687
Impairment loss on property, plant and equipment		40,631	-
Impairment loss on intangible assets		11	-
Loss on valuation of firm commitment		1,309	8,878
Idle tangible asset expenses		1,466	6,367
Increase to provisions		3,079	1,271
Donations		23,133	28,807
Others		36,794	26,354
	₩	161,877	205,038

- (*1) During the three-month period ended March 31, 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 \(\psi\)184,556 million of gain on disposals of investment in associates and \(\psi\)32,965 million of gain on bargain purchase.
- (*2) During the three-month period ended March 31, 2023, the Group disposed of CSP Compania Siderurgica do Pecem, which was classified as assets held for sale and recognized \text{\psi}102,470 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 periods ended March 31, 2024 and 2023 are as follows (excluding finance costs and income tax expense):

(in millions of Won)		March 31, 2024	March 31, 2023
Raw material used, changes in inventories and others	₩	10,465,365	12,579,632
Employee benefits expenses		1,211,194	1,065,766
Outsourced processing cost		2,549,589	2,419,422
Electricity and water expenses		322,578	274,880
Depreciation(* 1)		880,865	830,080
Amortization		122,641	122,791
Freight and custody expenses		674,468	514,299
Sales commissions		22,054	22,421
Loss on disposal of property, plant and equipment		13,365	18,687
Impairment loss on property, plant and equipment		40,631	-
Impairment loss on intangible assets		11	-
Donations		23,133	28,807
Others		1,304,911	1,003,233
	₩	17,630,805	18,880,018

(*1) Includes depreciation of investment property.

31. Income Taxes

The effective tax rates of the Group for each of the three-month periods ended March 31, 2024 and 2023 are 17.02% and 16.07%, respectively.

In 2023, the Pillar Two legislation has been enacted in the Republic of Korea, where the parent 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 three-month period ended March 31, 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 concluded that no Pillar Two income taxes will be levied on the Group for the three-month period ended March 31, 2024 since its subsidiaries and the parent company required to pay taxes are qualified for the application of transitional exemption or their effective tax rates are above 15%. 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 periods ended March 31, 2024 and 2023 are as follows:

(in Won, except per share information)	_	March 31, 2024	March 31, 2023
Profit attributable to controlling interest Weighted-average number of	₩	540,715,276,945	726,419,322,644
common shares outstanding(* 1)		75,876,207	75,849,177
Basic earnings per share	₩ _	7,126	9,577

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

(shares)	March 31, 2024	March 31, 2023
Total number of common shares issued	84,571,230	84,571,230
Weighted-average number of treasury shares	(8,695,023)	(8,722,053)
Weighted-average number of		
common shares outstanding	75,876,207	75,849,177

(b) Diluted earnings per share for the three-month period ended March 31, 2024 are calculated as follows:

(in Won, except share information)	March 31, 2024	
Profit attributable to controlling interest	₩	540,715,276,945
Gain or loss from revaluation of and exchange		
rate on exchangeable bonds		(87,838,993,624)
Adjusted weighted-average number		
of common shares outstanding(* 1)		79,189,781
Diluted earnings per share		5,719

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

(shares)	March 31, 2024
Weighted-average number	
of common shares outstanding	75,876,207
Weighted-average number	
of potential common shares	3,313,574
Adjusted weighted-average number	
of common shares	79,189,781

The Group's exchangeable bonds and Share-based Payment Program are its potential common shares with dilutive effect as of March 31, 2024 and 2023. Diluted earnings per share for the three-month period ended March 31, 2023 are equal to basic earnings per share for the period due to anti-dilutive effect.

33. Related Party Transactions

- (a) Material transactions between the Group and related parties for each of the three-month periods ended March 31, 2024 and 2023 are as follows:
 - 1) For the three-month period ended March 31, 2024

(in millions of Won)		Sale	s and others(*	1)	Purchase and others		
		Sales	Dividends	Others	Purchase of material	Others	
Associates and joint ventures(* 1)							
New Songdo International City							
Development, LLC	₩	57,107	-	-	-	94	
SNNC		27,914	-	3	120,908	9	
POSCO-SAM SUNG-SLOVAKIA PROCESSING CENTER		14,232	-	-	587	-	
Gunggi Green Energy		7,796	-	-	-	1,416	
POS-SeAH Steel Wire(Tianjin) CO., Ltd.		3,496	-	-	-	-	
POS SeAH Steel Wire(Nantong) Co., Ltd.		13,642	-	-	1	-	
South-East Asia Gas Pipeline Company Ltd.		-	15,015	-	-	-	
POSCO MC MATERIALS		28,943	-	-	1,172	177	
Samcheok Blue Power Co., Ltd.		74,533	2,471	169	-	-	
Pocheon-Hwado Highway Corp.		44,812	-	-	-	-	
POSCO(Guangdong) Automotive Steel Co., Ltd		67,017	-	-	77,103	-	
HBIS-POSCO Automotive Steel Co., Ltd		14,036	-	-	5,657	-	
Roy Hill Holdings Pty Ltd		-	114,870	-	439,363	-	
Others		24,506	23,620	171	42,008	23,404	
	₩	378,034	155,976	343	686,799	25,100	

- (*1) As of March 31, 2024, the Group provides payment guarantees to related parties (see Note 34).
- 2) For the three-month period ended March 31, 2023

(in millions of Won)		Sale	s and others(* 1	1)	Purchase a	ind others
	_	Sales	Dividends	Others	Purchase of material	Others
Associates and joint ventures(* 1)		<u> </u>				
New Songdo International City						
Development, LLC	₩	48,400	-	-	-	119
SNNC		45,184	-	3	151,036	871
POSCO-SAMSUNG-SLOVAKIA PROCESSING CENTER		12,939	-	-	9	-
Gunggi Green Energy		7,710	-	-	-	1,994
POS-SeAH Steel Wire(Tianjin) CO., Ltd.		5,246	-	-	-	-
POS SeAH Steel Wire(Nantong) Co., Ltd.		10,420	-	-	74	-
South-East Asia Gas Pipeline Company Ltd.		-	6,407	-	-	-
POSCO MC MATERIALS		23,753	-	-	2,220	73
Samcheok Blue Power Co., Ltd.		146,075	2,498	-	-	-
Pocheon-Hwado Highway Corp.		18,224	-	-	-	2
POSCO(Guangdong) Automotive Steel Co., Ltd		2,525	-	-	54,366	-
HBIS-POSCO Automotive Steel Co., Ltd		34,407	-	-	-	-
Roy Hill Holdings Pty Ltd		-	40,554	-	486,103	-
Others		27,593	29,767	4,569	66,857	24,458
	₩	382,476	79,226	4,572	760,665	27,517

(*1) As of March 31, 2023, the Group provides payment guarantees to related parties (see Note 34).

33. Related Party Transactions (cont'd)

(b) The balances of receivables and payables arising from significant transactions between the Group and related parties as of March 31, 2024 and December 31, 2023 are as follows:

1) March 31, 2024

(in millions of Won)			Receivab	les(* 1)			Payables	
	•	Trade accounts and notes receivable	Loans	Others	Total	Trade accounts and notes payable	Others	Total
Associates and joint ventures			,					
New Songdo International City								
Development, LLC	₩	57,543		20,255	77,798		7,885	7,885
Gunggi Green Energy		11,471	-	8,450	19,921		594	594
POSCO(Guangdong) Automotive Steel Co., Ltd		57,257	-	4	57,261	54,399	-	54,399
AMCI(WA)PTYLTD			131,945		131,945	-	-	-
HBIS-POSCOAutomotiveSteelCo.,Ltd		19,894	-	129	20,023	277	7,043	7,320
POS-SeAH Steel Wire(Tianjin) CO., Ltd.		4,203	-		4,203	-	-	-
Samcheok Blue Power Co., Ltd.		182,731	-	180	182,911		8,298	8,298
Nickel Mining Company SAS			65,382	385	65,767		358	358
POS-SeAH Steel Wire(Nantong) Co., Ltd.		15,929	-		15,929		-	-
POSCO MC MATERIALS		10,586		49	10,635	1,601		1,601
Pocheon-Hwado Highway Corp.		22,459	-		22,459	-	14,879	14,879
UITrans LRT Co., Ltd.		1,116	48,719	8,868	58,703		3,486	3,486
Roy Hill Holdings Pty Ltd		91,837		24,019	115,856	237,936	14	237,950
SNNC		12,957	-	83	13,040	16,838	1,529	18,367
FQM Australia Holdings Pty Ltd			267,131	-	267,131			
Others		22,858	16,917	124,501	164,276	8,451	5,677	14,128
	₩	510,841	530,094	186,923	1,227,858	319,502	49,763	369,265

(*1) As of March 31, 2024, the Group recognizes an allowance for doubtful account for receivables above amounting to \text{W421,452 million}.

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}.

33. Related Party Transactions (cont'd)

- (c) Major financial transactions between the Group and related parties for the three-month period ended March 31, 2024 and the year ended December 31, 2023 are as follows:
 - 1) For the three-month period ended March 31, 2024

(in millions of Won)	_	Beginning	Lend	Collect	Others(* 1)	Ending
Associates and joint ventures						
UITrans LRT Co., Ltd.	₩	46,335	2,386	(2)	-	48,719
PT. Tanggamus Electric Power		4,826	-	(644)	109	4,291
Nickel Mining Company SAS		64,197	-	-	1,185	65,382
KRAKATAU POS-CHEM DONG-SUH CHEMICAL		2,579	-	-	115	2,694
Hyo-chun Co., Ltd.		2,382	-	-	-	2,382
AMCI (WA) PTY LTD		112,177	1,167	-	18,601	131,945
POS-AUSTEM WUHAN AUTOMOTIVE CO.,LTD		5,158	-	-	229	5,386
FQM Australia Holdings Pty Ltd		256,938	-	-	10,193	267,131
POHANG E&E Co. , LTD	_	1,646	518			2,164
	₩_	496,238	4,071	(646)	30,432	530,094

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

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.

(d) For each of the three-month periods ended March 31, 2024 and 2023, details of compensation to key management officers are as follows:

(in millions of Won)	<u> Mar</u>	ch 31, 2024	March 31, 2023
Short-term benefits	₩	43,273	54,840
Long-term benefits		2,953	2,558
Retirement benefits		8,761	13,800
	₩	54,987	71,198

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) Details of guarantees
 - 1) Contingent liabilities on outstanding guarantees provided by the Group as of March 31, 2024 are as follows:

(in millions of Won)				Guarantee			e amount
Guarantor	Guarantee beneficiary	Financial institution	F	oreign currency	Won equivalent	Foreign currency	Won equivalent
[The Company]							
POSCO HOLDINGS INC.	POSCO Asia Co., Ltd.	Credit Agricole and others	USD	200.000.000	269.360	_	
	POSCO Argentina S.A.U	HSBC and others	USD	411,900,000	554,747	381,595,483	513.933
POSCO	POSCO MEXICO S.A. DE C.V.	BOA and others	USD	60,000,000	80.808	60,000,000	80.808
. 5555	POSCO-VIETNAM Co., Ltd.	Shinhan Bank and others	USD	110,000,000	148,148	80,000,000	107,744
	PT. KRAKATAU POSCO	Export-Import Bank of	000	110,000,000	140,140	00,000,000	107,744
	TT. RIVANATAO T 0000	Korea and others	USD	2.060.300.000	2.774.813	1.023.496.118	1.378.445
	POSCO COATED STEEL (THAILAND) CO., LTD.	HSBC and others	THB	4,800,000,000	177,168	3,936,000,000	145,278
	POSCO Maharashtra Steel Private Limited	DBS	USD	40.000.000	53.872	40,000,000	53.872
	POSCO ASSAN TST STEEL INDUSTRY Inc	Citibank and others	USD	138,500,000	183.839	138.500.000	183.839
POSCO INTERNATIONAL Corporation	POSCO INTERNATIONAL GLOBAL DEVELOPMENT	POSCO Asia Co., Ltd.					
	PTE. LTD.		USD	180,000,000	242,424	150,000,000	202,020
	POSCO INTERNATIONAL POWER (PNGLAE)	KDB Singapore					
	LIMITED		USD	20,880,000	28,121	9,400,000	12,660
	GOLDEN LACE POSCO INTERNATIONAL CO., LTD.	POSCO Asia Co., Ltd.	USD	13,200,000	17,778	11,000,000	14,815
	PT. Bio Inti Agrindo	BTPN and others	IDR	1,232,000,000,000	104,597	1,160,000,000,000	98,484
	POSCO ASSAN TST STEEL INDUSTRY Inc	Woori Bank Hong Kong and others	USD	13,650,000	18,384	13,650,000	18,384
	POSCO INTERNATIONAL Deutschland GmbH	Bank Mendes Gans Amsterdam				19,459,800	26,208
	POSCO INTERNATIONAL JAPAN Corp.		USD	50,000,000	67,340	6,628,021	8,927
	GRAIN TERMINAL HOLDING PTE. LTD.	Export-Import Bank of					
		Korea and others	USD	27,000,000	38,384	27,000,000	36,364
	POSCO INTERNATIONAL E&P MALAYSIA SDN. BHD.	SC MALAYSIA	USD	6,000,000	8,081	6,000,000	8,081
	PT. KRAKATAU POSCO ENERGY	POSCO Asia Co., Ltd. and others	USD	102,903,407	138,590	53,201,703	71,652
	Posco International Mexico e-Mobility S.A DE C.V.	Export-Import Bank of					
	PT POSCO INTERNATIONAL ENP INDONESIA	Korea and others PT Bank Negara Indonesia	USD	31,054,800	41,825	30,379,000	40,914
	POSCO E&C Vietnam Co., Ltd.		USD	750,000	1,010	750,000	1,010
POSCO Eco & Challenge Co., Ltd.		Credit Agricole and others	USD	25,000,000	33,670	25,000,000	33,670
POSCO STEELEON CO.,LTD.	Myanmar POSCO C&C Company, Limited.	POSCO Asia Co., Ltd.	USD	13,986,947	18,838	9,952,170	13,404
POSCO FUTURE M CO., LTD.	ULTIUM CAM GP INC.	Investissement Quebec,	CAD	299.582.500	298.014		
POSCO WIDE Co., Ltd	POSCO Eco & Challenge Co., Ltd.	Strategic Innovation Fund Seoul Guarantee Insurance	KRW	239,302,300	250,014	92	92
POSCO WIDE Co., Ltd	POSCO ESS à Challenge Co., Etc.	Seoul Guarantee Insurance	KRW	52	92	32	92
[Associates and joint ventures]							
POSCO HOLDINGS INC.	Nickel Mining Company SAS	SMBC	EUR	46,000,000	66.835	46,000,000	66.835
POSCO	LLP POSUK Titanium	SMBC London	USD	13.250.000	17.845	13.250.000	17.845
POSCO INTERNATIONAL Corporation	GLOBAL KOMSCO Daewoo LLC	Hana Bank Bahrain	USD	6,650,000	8,956	6,300,000	8,485
POSCO Eco & Challenge Co., Ltd.(*1)	Chun-cheon Energy Co., Ltd	Kookmin Bank and others	KRW	137.500	137.500	137.500	137.500
1 0000 200 a onancinge co., 2.a.(1)	onal dicor energy oo., eta	resolum bank and suicis	KRW	137,500	137,300	137,300	137,300
[Others]							
POSCO Eco & Challenge Co., Ltd.(*2)	Subcontractors for maintenance projects, etc.	Kookmin Bank and others	KRW	1,550,534	1,550,534	646,933	646.933
POSCO WIDE Co., Ltd.	Korea Electric Power Corporation and others	Seoul Guarantee Insurance	KRW	1.830	1.830	1.830	1.830
POSCO AUSTRALIA PTY LTD	Department of Trade and	Woori Bank and others	NICOV	1,000	1,000	1,000	1,000
TOGGO AGGINALIAT TI LIB	Investment (NSW Government) and others	Woon bank and others	AUD	18.754.695	14,701	16.754.695	14,701
POSCO Maharashtra Steel Private Limited	Gail India and others	HSBC and others	INR	797,595,643	12,881	797,595,643	12,881
			USD	3,523,025,154	4,744,813	2,103,562,295	2,833,080
			KRW	1,689,956	1,689,956	786,355	786,355
			IDR	1.232.000.000.000	104.597	1.160.000.000.000	98.484
			INR	797.595.643	12.881	797,595,643	12.881
			THB	4,800,000,000	177,168	3,936,000,000	145,278
			EUR	46,000,000	66,835	46,000,000	66,835
			AUD	16,754,695	14,701	16,754,695	14,701
			CAD	299,562,500	298,014	-	
			-				

- (*1) The above contingencies include PF contracts, which provide credit enhancement through payment guarantee in relation to the SOC projects as of March 31, 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 March 31, 2024.

34. Commitments and Contingencies (cont'd)

- 2) Details of credit enhancements by type of the Group's PF business as of March 31, 2024 are as follows:
 - Maintenance projects and others
 - a. 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)										Ва	lance of the lo	ins		
Provider	Projects(*1)	Borrower	Туре	Credit enhancement measures		Agreed amount	Executed amount	Total	Within 3 months	3~6 months	6 months ~1 year	1 year ~2 years	2 years ~3 years	After 3 years
[The Company]														
POSCO Eco & Challenge Co., Ltd.	Other projects	JB CLARK HILLS CORP	Main PF	Debt assumption										
					₩	44,444	37,037	37,037	•		-	37,037	-	
[Associates and joint ventures]														
POSCO Eco & Challenge Co., Ltd.	Other projects	New Songdo International City Development, LLC	Mortgage Ioan	Debt assumption										
						676,000	520,000	465,617	448,017		19,600			
(Others)														
POSCO Eco & Challenge Co., Ltd.	Maintenance projects	Bangbae Shindonga Apartment Reconstruction	Main PF	Debt assumption										
		and Maintenance Project				912,046	725,020	404,360	20,654	59,700	83,812	122,545	94,217	23,432
	Other projects	Mastern 123 Yeoju Samovo PFV op., Ltd.	Main PF	Debt assumption		63,700	49,000	49,000		49,000				
	Other projects	Civio Center PFV	Bridge Ioan	Debt assumption		45.000	45.000	45.000			45,000			
	Other projects	Daon I & P	Main PF	Joint guarantee		38,000	30,000	1,100				1,100		
	Other projects	Ecocity	Main PF	Debt assumption		53,300	41,000	39,700					39,700	
POSCO DX	Other projects	Jeonnong schoo keeper co. and others	Main PF	Supplemental funding		1.122.320	123.309	456,273						456,273
		and once		agreement		2,232,388	1,013,329	995,433	20,654	108,700	128,812	123,645	133,917	479,705
					_	2,952,810	1,570,388	1,498,087	466,671	108,700	148,412	160,682	133,917	479,705

- (*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 March 31, 2024 are as follows:

(in millions of Won)	Number of constructions		Contract amount	Contingency amount(* 1)(* 2)	Balance of loans
Maintenance projects	22	₩	5,952,929	3,659,129	1,697,294
Other projects	1_		110,340	35,000	34,300
	23	₩	6,063,269	3,694,129	1,731,594

- (*1) The overlapping amount with other credit enhancement measures such as the agreed debt acceptance upon loan origination amounts to \text{\psi}118,500 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.

34. Commitments and Contingencies (cont'd)

c. Details of contingencies of claim for damages in the event of non-compliance with construction completion covenant as of March 31, 2024 are as follows:

(in millions of Won)	Number of constructions		Contract amount	Contingency amount(* 1)(* 2)	Balance of loans
Maintenance projects	1	₩	309,260	76,000	20,000
Other projects	37		9,414,459	7,688,504	5,916,493
	38	₩	9,723,719	7,764,504	5,936,493

- (*1) The overlapping amount with other credit enhancement measures such as the agreed debt assumption upon loan origination amounts to \(\psi_79,000\) 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 acceptance	1	₩ 81.883	32.375
	Pocheon-Hwado Highway Corp.(*2)	Providing funds	1	24,923	22,323
POSCO E∞ & Challenge Co., Ltd.	UITrans LRT Co., Ltd(*1)	Providing funds and			
_		debt acceptance	1	205,051	163,591
	Pocheon-Hwado Highway Corp.(*2)	Providing funds	1	319,526	217,183
	POHANG E&E Co., LTD(*3)	Providing funds and supplemental funding			
		agreement	1	71,930	49,328
	Pureun Tongyeong Enviro Co., Ltd.(*3)	Providing funds	1	22,714	11,991
	Pure Gimpo.Co.,Ltd(*3)	Providing funds	1	51,565	24,687
	Clean Iksan Co.,Ltd(*3)	Providing funds	1	44,054	23,652
		-	11	821,646	545,130
[Others]		-			
POSCO DX	Western Inland highway CO.,LTD.	Providing funds	1	47.348	18.748
	Busan Sanseong Tunnel	Refinancing	1	7.621	13.792
POSCO E∞ & Challenge Co., Ltd.	Western Seoul highway CO.,LTD. and others	Supplemental funding agreement	11	62,720	30,047
	Western Inland highway CO.,LTD. and others	Providing funds	44	2,884,654	1,261,140
	Pohang Youngil Bay New Port	Debt acceptance	1	2,250	1,602
	Busan Sanseong Tunnel	Refinancing	1	35,296	26,750
		-	59	3,039,889	1,352,079
		-	70	w 3,861,535	1,897,209

- (*1) The Group provides a funding commitment of \(\psi 82,518\) million (including other shares: \(\psi 290,068\) million) equivalent to the Group's share of the loan balance for the private investment project.
- (*2) The Group provides a funding commitment of \(\psi 217,183\) million (including other shares: \(\psi 423,524\) million) equivalent to the Group's share of the loan balance for the private investment project.
- (*3) The Group provides a funding commitment of \widetilde{\pi}105,322 million (including other shares: \widetilde{\pi}192,785 million) equivalent to the Group's share of the loan balance for the private investment project.

34. Commitments and Contingencies (cont'd)

3) Other guarantees

① As of March 31, 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:

(in millions of Won) Provider of credit enhancement	Recipient of credit enhancement	Types of guarantees		Agreed amount	Executed amount	Guarantor
		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-			
[Subsidiaries]						
POSCO Eco & Challenge Co., Ltd.	Ventanas Philippines Construction Inc	Guarantee on performance for contracts and others	₩	10,514	10,514	TRADE INSURANCE CORPORATION and others
POSCO WIDE Co., Ltd	POSCO	Letter of credit		30	30	Seoul Guarantee Insurance
	POSCO E∞ & Challenge Co., Ltd.	Guarantee on performance				
		and others		281	281	Seoul Guarantee Insurance
	POSCO DX	Guarantee on performance		53	53	Seoul Guarantee Insurance
	POSCO INTERNATIONAL Corporation	Guarantee on performance	_	313	313	Seoul Guarantee Insurance
			_	11,191	11,191	
[Associates and joint ventures]						
POSCO E∞ & Challenge Co., Ltd.	PT.Tanggamus Electric Power	Letter of credit		2,732	2,732	Hana Bank
	PT. Wampu Electric Power	Letter of credit		2,963	2,963	Hana Bank
	Pocheon-Hwado Highway Corp.	Guarantee on performance				Construction Guarantee
		for projects	_	23,315	23,315	Cooperative
			_	29,010	29,010	
[Others]						
POSCO E∞ & Challenge Co., Ltd.	DAEWOO ENGINEERING	Guarantee on performance				
	& CONSTRUCTION Co., Ltd and others	for construction and others		7.245.196	7,245,161	Construction Guarantee Cooperative and others
POSCO WIDE Co., Ltd	and otners Pureun Paju Co., Ltd. and others	Guarantee on performance		7,240,150	7,240,101	Cooperative and others
. 5555 71152 55., 215	r dicarr aja oo., zia. aria oireis	and others		16,172	16,172	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		2.932	2.932	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
			_	7,267,294	7,267,259	
			₩	7,307,495	7,307,460	

② As of March 31, 2024, the primary payment guarantees and other guarantees that the Group is provided from the guarantee institution are as follows:

(in millions of Won)

Provider	Types of guarantees Agreed amount		greed amount	Executed amount	
Construction Guarantee Cooperative	Subcontractor Payment Guarantee and others	₩	7,182,415	7,182,415	
Engineering guarantee insurance	Guarantee on performance for	**	7,102,410	7,102,413	
3 11 3 3 11 11 11 11 11	EPC contracts and others		890,187	523,334	
Seoul Guarantee Insurance	Construction performance guarantee and others		562,772	562,772	
Korea Housing & Urban	Housing Guarantee and others				
Guarantee Corporation			5,393,054	5,387,804	
Deutsche Seoul	Guarantee on performance		16,138	16,138	
Woori Bank and others	Foreign currency guarantee		2,045,543	799,607	
Korea software financial	Guarantee on performance				
cooperative	for contracts		120,816	120,816	
Seoul Guarantee Insurance	Guarantee on performance				
	for contracts		62,476	62,476	
Construction Guarantee	Guarantee on performance				
Cooperative	for contracts		5,735	5,735	
		₩	16,279,136	14,661,097	

34. Commitments and Contingencies (cont'd)

(b) Other commitments

Details of other commitments of the Group as of March 31, 2024 are as follows:

Company	Description
POSCO HOLDINGS INC.	As of March 31, 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 March 31, 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 March 31, 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 March 31, 2024, 54 million tons of iron ore and 13 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 March 31, 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 March 31, 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 March 31, 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 March 31, 2024, the Company recognized W124,567 million as other financial liabilities related to the terms of this agreement.

34. Commitments and Contingencies (cont'd)

(c) Litigation in progress

The Group is involved in 323 lawsuits aggregating to \$41,066.8 billion as defendant as of March 31, 2024, which arise from the ordinary course of business such as claim for confirmation of employee status. The Group has recognized provisions amounting to \$437.9 billion for 55 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 March 31, 2024(d) Other Contingencies

Other major contingencies for the Group as of March 31, 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 March 31, 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 March 31, 2024, POSCO Eco & Challenge Co., Ltd. has provided 41 blank checks and 4 blank promissory notes as collateral for agreements and outstanding loans.
POSCO DX	As of March 31, 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 three-month periods ended March 31, 2024 and 2023 are as follows:

(in millions of Won)	_	March 31, 2024	March 31, 2023
Trade accounts and notes receivable	₩	217,454	(1,315,649)
Other receivables		30,838	33,485
Inventories		(223,071)	493,595
Other current assets		(27,605)	(92,647)
Other non-current assets		(50,774)	16,443
Trade accounts and notes payable		(578,270)	(37,946)
Other payables		(524,919)	(460,308)
Other current liabilities		(55,926)	(15,291)
Provisions		(93,129)	(106,523)
Payments of severance benefits		(115,519)	(130,665)
Plan assets		91,445	74,005
Other non-current liabilities	_	3,305	(15,607)
	₩	(1,326,171)	(1,557,108)

36. Operating Segments

(a) The Group's operating businesses are organized based on the nature of markets and customers. During the three-month period ended March 31, 2024, the Group changed its internal organization and internal reporting structures. As a result, operating segments were recategorized 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
Green Materials and energy		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) Information about reportable segments as of and for each of the three-month periods ended March 31, 2024 and 2023 are as follows:
 - 1) For the three-month period ended March 31, 2024

			G	Breeen Infrastructure		Green materials and		
(in millions of Won)		Steel	Trading	Construction	Logistics and others	Energy	Others	Total
External revenues	₩	9,860,776	5,333,768	1,842,875	97,569	906,360	10,602	18,051,950
Internal revenues		5,583,438	5,191,876	692,088	994,437	249,782	913,093	13,624,714
Inter segment revenues		3,666,779	2,406,856	658,689	990,263	247,113	908,215	8,877,915
Total revenues		15,444,214	10,525,644	2,534,963	1,092,006	1,156,142	923,695	31,676,664
Segment profits		210,072	173,696	80,356	38,762	25,244	931,635	1,459,765

2) For the three-month period ended March 31, 2023

		G	Greeen Infrastructure		Green materials and			
(in millions of Won)	_	Steel	Trading	Construction	Logistics and others	Energy	Others	Total
External revenues	₩	10,330,478	6,053,279	1,963,608	77,011	916,152	40,350	19,380,878
Internal revenues		5,439,632	4,486,010	423,352	866,789	245,783	548,189	12,009,755
Inter segment revenues		3,743,290	2,200,659	400,262	865,680	245,148	544,741	7,999,780
Total revenues		15,770,110	10,539,289	2,386,960	943,800	1,161,935	588,539	31,390,633
Seament profite		275 600	184 573	68 234	47 100	48 028	560 080	1 103 614

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)		March 31, 2024	March 31, 2023
Total profit for reportable segments	₩	1,459,765	1,193,614
Corporate fair value adjustments		(17,599)	200,800
Elimination of inter-segment profit		(834,351)	(554,109)
Income tax expense		124,696	160,952
Profit before income tax expense	₩	732,511	1,001,257

37. Events after the reporting period

Pursuant to the resolution of the Board of Directors on May 14, 2024, the Group decided to pay interim cash dividends of \(\psi_2,500\) per common share (total dividend: \(\psi_189.7\) billion).