

POSCO INTERNATIONAL Corporation and its subsidiaries

Consolidated financial statements
for the year ended December 31, 2024
with the independent auditor's report



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Independent auditor's report

(English translation of a report originally issued in Korean)

The Shareholders and Board of Directors POSCO International Corporation

Opinion

We have audited the consolidated financial statements of POSCO International Corporation and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statement of financial position as of December 31, 2024, and the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and the notes to the consolidated financial statements, including material accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2024, and its consolidated financial performance and its consolidated cash flows for each of the year then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("KIFRS").

We have audited the Group's internal control over financial reporting ("ICFR") as of December 31, 2024 based on the Conceptual Framework for Design and Operation of ICFR established by the Operating Committee of ICFR in Korea, in accordance with Korean Standards on Auditing ("KSA"), and our report dated as of March 12, 2025 expressed an unqualified opinion thereon.

Basis for opinion

We conducted our audit in accordance with KSA. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

The timing of recognizing revenue

As described in Note 3.2.3 of the consolidated financial statements, the sales arising from export transactions and triangular transactions account for 86% of the total sales of the Group. We have identified that the scale of these transactions is significant, and it is highly probable that the period to which the revenue is attributable is incorrect due to the varying timing of revenue recognition based on transaction terms. In this regard, we have identified the timing of recognizing revenue as a significant risk.

In this regard, the key audit procedures we performed are as follows:

- Evaluate the internal control procedures established by the Group related to the timing of revenue recognition.
- Conduct tests on the timing of revenue recognition through the review of contracts and shipping documents by sampling transactions occurring before and after the reporting date.

Occurrence of foreign sales

The Group operates in the trading business and conducts operations with clients located in various countries around the world. Due to the nature of the transactions, foreign sales (triangular transactions) do not involve the direct possession of inventories, and the control over the inventories is transferred through the bill of lading. Therefore, we have assessed that there is a high risk of misstatement in the financial statements regarding the occurrence of foreign sales, which we have identified as a significant risk.

In this regard, the key audit procedures we performed are as follows:

- Understand and evaluate the internal controls established by the Group related to the occurrence of foreign sales.
- Obtain key documents (shipping documents) related to foreign sales and review them to confirm the occurrence.
- Corroborate the shipment of inventory by reviewing shipping vessel confirmations or export declaration documents.

Other matters

The consolidated financial statements of the Group for the year ended December 31, 2023 were audited by another auditor, whose report dated March 12, 2024 expressed an unqualified opinion thereon.

Responsibilities of management and those charged with governance for the consolidated financial statements

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

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

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

Auditor's responsibilities for the audit of the consolidated financial statements

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

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

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

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

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

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

The engagement partner on the audit resulting in this independent auditor's report is Sang-il Bae.

March 12, 2025

This audit report is effective as of March 12, 2025, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditor's report to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modifications to this report.

POSCO INTERNATIONAL Corporation and its subsidiaries

Consolidated financial statements
for each of the two years in the period ended December 31, 2024

“The accompanying consolidated financial statements, including all footnotes and disclosures, have been prepared by, and are the responsibility of, the Group.”

Lee, Kye-in
Chief Executive Officer
POSCO INTERNATIONAL Corporation

POSCO International Corporation and its subsidiaries
Consolidated statements of financial position
as of December 31, 2024, and 2023

		Korean won in millions		U.S. dollar in thousands
	Notes	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Assets				
Current assets				
Cash and cash equivalents	4,30,31	\ 1,057,204	\ 1,136,863	\$ 719,186
Trade and other receivables, net	5,30,31	4,511,486	4,467,452	3,069,038
Other current financial assets	6,30,31	126,928	243,283	86,346
Derivative financial assets	20,30	96,506	37,331	65,650
Other current assets	7,19	260,239	226,315	177,033
Inventories, net	8	2,080,674	1,958,797	1,415,424
Assets held for sale	9	135,138	7,219	91,931
		\ 8,268,175	\ 8,077,260	\$ 5,624,608
Non-current assets				
Trade and other receivables, net	5,30,31	\ 366,514	\ 354,308	\$ 249,329
Other non-current financial assets	6,30,31	57,538	77,544	39,141
Long-term derivative financial assets	20,30	26,384	7,231	17,948
Investments in associates and joint ventures	9	725,847	970,602	493,773
Property, plant and equipment, net	10	4,240,600	3,704,943	2,884,762
Right-of-use assets, net	11	382,805	392,509	260,412
Intangible assets, net	12	2,553,041	2,331,917	1,736,763
Investment properties, net	13	137,912	141,623	93,818
Net defined benefit assets	17	74,416	63,402	50,623
Other non-current assets	7	41,441	37,126	28,191
Deferred tax assets	28	461,653	459,283	314,050
		\ 9,068,151	\ 8,540,488	\$ 6,168,810
Total assets		\ 17,336,326	\ 16,617,748	\$ 11,793,418
Liabilities and equity				
Current liabilities				
Trade and other payables	11,14,30,31	\ 2,932,833	\ 3,069,417	\$ 1,995,124
Borrowings	15,30,31	2,068,254	1,830,502	1,406,976
Current portion of bonds	15,30,31	1,117,735	876,709	760,364
Derivative financial liabilities	20,30,31	99,826	44,584	67,909
Current provisions	18,19	106,382	102,370	72,369
Other current liabilities	16	281,014	268,348	191,166
Current tax liabilities		53,654	83,549	36,499
		\ 6,659,698	\ 6,275,479	\$ 4,530,407
Non-current liabilities				
Trade and other payables	11,14,30,31	\ 342,775	\ 359,175	\$ 233,180
Borrowings	15,30,31	1,140,646	1,214,915	775,950
Bonds	15,30,31	1,567,097	1,864,114	1,066,052
Long-term derivative financial liabilities	20,30,31	-	8,358	-
Other non-current liabilities	16	66,321	81,655	45,116
Net defined benefit liabilities	17	9,502	8,823	6,464
Provisions	18,19,20	153,433	134,715	104,376
Deferred tax liabilities	28	47,391	45,752	32,239
		\ 3,327,165	\ 3,717,507	\$ 2,263,377
Total liabilities		\ 9,986,863	\ 9,992,986	\$ 6,793,784
Equity				
Issued capital	21	\ 879,614	\ 879,614	\$ 598,377
Capital surplus	21	1,836,731	1,826,225	1,249,477
Other components of equity	21	(35,721)	(24,961)	(24,300)
Accumulated other comprehensive income	6,22	228,778	85,700	155,631
Retained earnings	23	3,635,149	3,336,680	2,472,890
Equity attributable to the owners of the Parent Company		\ 6,544,551	\ 6,103,258	\$ 4,452,075
Non-controlling interests		804,912	521,504	547,559
Total equity		\ 7,349,463	\ 6,624,762	\$ 4,999,634
Total liabilities and equity		\ 17,336,326	\ 16,617,748	\$ 11,793,418

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

POSCO International Corporation and its subsidiaries
Consolidated statements of comprehensive income
for each of the two years in the period ended December 31, 2024

	Notes	Korean won in millions		U.S. dollar in thousands
		2024	2023	2024
Sales	3	\ 32,340,793	\ 33,132,821	\$ 22,000,539
Cost of sales	24	(30,444,810)	(31,293,288)	(20,710,755)
Gross profit		\ 1,895,983	\ 1,839,533	\$ 1,289,784
Selling and administrative expenses	24,25	(779,062)	(676,422)	(529,974)
Operating profit	3	\ 1,116,921	\ 1,163,111	\$ 759,810
Share of profit in associates	9	146,320	111,769	99,537
Share of loss in associates	9	(18,569)	(20,461)	(12,633)
Finance income	26,30	1,437,136	1,282,275	977,644
Finance costs	26,30	(1,711,581)	(1,572,100)	(1,164,341)
Other income	27	40,336	21,417	27,439
Other expenses	27	(303,947)	(71,389)	(206,767)
Profit for the year before tax		\ 706,616	\ 914,622	\$ 480,689
Income tax expenses	28	(203,206)	(234,203)	(138,235)
Profit for the year		\ 503,410	\ 680,419	\$ 342,454
Other comprehensive income (loss):				
<i>Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:</i>				
Equity adjustments in equity method	9,22,28	\ 59,228	\ 13,808	\$ 40,291
Loss on equity adjustments in equity method	9,22,28	94	263	64
Exchange difference on translation of foreign operations	22,28	90,890	29,419	61,830
Gain (loss) on valuation of derivatives	20,22	269	(990)	183
<i>Other comprehensive income (loss) not to be reclassified to profit or loss in subsequent periods:</i>				
Loss on valuation of financial assets at fair value through other comprehensive income ("FVOCI")	22,28	\ (14,103)	\ (4,348)	\$ (9,594)
Equity adjustments in equity method	9,22,28	(25,524)	21,584	(17,363)
Remeasurement loss on defined benefit liabilities	17,28	(10,929)	(17,243)	(7,435)
Exchange differences on translation of foreign operations	22,28	34,570	7,854	23,517
Other comprehensive income for the year, net of tax		\ 134,495	\ 50,347	\$ 91,493
Total comprehensive income for the year, net of tax		\ 637,905	\ 730,766	\$ 433,947
Profit for the year attributable to:				
Owners of the Parent Company		\ 514,555	\ 673,886	\$ 350,037
Non-controlling interests		(11,145)	6,533	(7,582)
Total comprehensive income attributable to:				
Owners of the Parent Company		\ 614,294	\ 716,976	\$ 417,887
Non-controlling interests		23,611	13,790	16,061
Earnings per share (Korean won and U.S. dollar):				
Basic	29	\ 3,019	\ 3,939	\$ 2.05
Diluted	29	\ 3,019	\ 3,939	\$ 2.05

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

POSCO International corporation and its subsidiaries
Consolidated statements of changes in equity
for each of the two years in the period ended December 31, 2024

	Korean won in millions									U.S. dollar in thousands
	Equity attributable to the owners of the Parent Company									
	Issued capital	Capital surplus	Other components of equity	Hybrid bonds	Accumulated other comprehensive income (loss)	Retained earnings	Sub-total	Non-controlling interest	Total	Total
As of January 1, 2023	\ 616,876	\ 540,527	\ 382	\ -	\ 16,974	\ 2,808,105	\ 3,982,864	\ 415,263	\ 4,398,127	\$ 2,991,923
Profit for the year	-	-	-	-	-	673,886	673,886	6,533	680,419	462,870
Net loss on valuation of financial assets at FVOCI	-	-	-	-	(4,348)	-	(4,348)	-	(4,348)	(2,958)
Equity adjustments in equity method	-	-	-	-	35,654	-	35,654	-	35,654	24,254
Exchange differences on translation of foreign operations	-	-	-	-	29,419	-	29,419	7,854	37,273	25,356
Remeasurement of net defined benefit liabilities (assets)	-	-	-	-	-	(17,140)	(17,140)	(103)	(17,243)	(11,730)
Loss on valuation of derivatives	-	-	-	-	(495)	-	(495)	(494)	(989)	(673)
Total comprehensive income	\ -	\ -	\ -	\ -	\ 60,230	\ 656,746	\ 716,976	\ 13,790	\ 730,766	\$ 497,119
Dividends (dividends per share: \ 1,000)	-	-	-	-	-	(123,355)	(123,355)	-	(123,355)	(83,915)
Dividends from subsidiaries, etc.	-	-	-	-	-	-	-	(13,058)	(13,058)	(8,883)
Capital increase of subsidiaries	-	(2,130)	-	-	-	-	(2,130)	33,271	31,141	21,184
Business combination	262,738	1,294,083	(28,836)	139,571	8,496	-	1,676,052	73,648	1,749,700	1,190,272
Acquisition of shares of subsidiary	-	(2,530)	(12,765)	-	-	-	(15,295)	(65,565)	(80,860)	(55,007)
Disposal of subsidiaries	-	(3,517)	-	-	-	-	(3,517)	64,155	60,638	41,250
Dividends from hybrid bonds	-	-	-	-	-	(4,816)	(4,816)	-	(4,816)	(3,276)
Redemption of hybrid bonds	-	(429)	-	(139,571)	-	-	(140,000)	-	(140,000)	(95,238)
Transactions of stock compensation	-	221	16,258	-	-	-	16,479	-	16,479	11,210
As of December 31, 2023	\ 879,614	\ 1,826,225	\ (24,961)	\ -	\ 85,700	\ 3,336,680	\ 6,103,258	\ 521,504	\ 6,624,762	\$ 4,506,639
As of January 1, 2024	\ 879,614	\ 1,826,225	\ (24,961)	\ -	\ 85,700	\ 3,336,680	\ 6,103,258	\ 521,504	\ 6,624,762	\$ 4,506,639
Profit for the year	-	-	-	-	-	514,555	514,555	(11,145)	503,410	342,456
Net loss on valuation of equity instruments at FVOCI	-	-	-	-	(14,104)	-	(14,104)	-	(14,104)	(9,595)
Equity adjustments in equity method	-	-	-	-	33,799	-	33,799	-	33,799	22,993
Exchange differences on translation of foreign operations	-	-	-	-	90,890	-	90,890	34,570	125,460	85,347
Remeasurement of net defined benefit liabilities (assets)	-	-	-	-	-	(10,981)	(10,981)	52	(10,929)	(7,435)
Gain on valuation of derivatives	-	-	-	-	135	-	135	134	269	183
Total comprehensive income	\ -	\ -	\ -	\ -	\ 110,720	\ 503,574	\ 614,294	\ 23,611	\ 637,905	\$ 433,949
Dividends (dividends per share: \ 1,000)	-	-	-	-	-	(170,444)	(170,444)	-	(170,444)	(115,948)
Dividends from subsidiaries, etc.	-	-	-	-	-	-	-	(6,165)	(6,165)	(4,194)
Capital increase of subsidiaries	-	425	-	-	-	-	425	265,962	266,387	181,216
Other capital adjustments	-	-	2,518	-	-	(2,303)	215	-	215	146
Transactions of stock compensation	-	10,081	(13,278)	-	-	-	(3,197)	-	(3,197)	(2,175)
Reclassification due to disposal of equity instruments measured at FVOCI	-	-	-	-	32,358	(32,358)	-	-	-	-
As of December 31, 2024	\ 879,614	\ 1,836,731	\ (35,721)	\ -	\ 228,778	\ 3,635,149	\ 6,544,551	\ 804,912	\ 7,349,463	\$ 4,999,633

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

POSCO International corporation and its subsidiaries
Consolidated statements of cash flows
for each of the two years in the period ended December 31, 2024

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Operating activities			
Profit for the year	\ 503,410	\ 680,419	\$ 342,456
Reconciliation of profit for the year to net cash flows provided by operating activities:	1,260,461	1,088,939	\$ 857,456
Changes in operating assets and liabilities:	(558,176)	(286,432)	\$ (379,712)
Interest received	96,408	69,594	65,584
Dividends received	128,365	126,375	87,323
Interest paid	(320,907)	(306,030)	(218,304)
Income tax paid	(232,680)	(296,429)	(158,286)
Net cash flows provided by operating activities	\ 876,881	\ 1,076,436	\$ 596,517
Investing activities			
Cash inflows from financing activities			
Decrease in short-term financial instruments	\ 496,160	\ 155,816	337,524
Disposal of financial assets at FVOCI	7,040	-	4,789
Disposal of investments in associates	50,660	2,430	34,463
Decrease in guarantee deposits	4,515	1,653	3,071
Decrease in long-term guarantee deposits	1,017	947	692
Disposal of property, plant and equipment	32,906	10,158	22,385
Disposal of intangible assets	4,926	1,604	3,351
Disposal of assets held for sale	7,550	2,035	5,136
Decrease in short-term loans	17,351	5,642	11,803
Decrease in long-term loans	2	5,404	1
Decrease in long-term financial instruments	58	125	40
Increase in guarantee deposits received	92	526	63
Increase in long-term guarantee deposits received	-	100	-
Decrease in finance lease receivables	27,143	57,469	18,465
Decrease in other current assets	-	7	-
Receipt of government subsidies	-	52	-
Cash inflows due to business combination	-	605,450	-
Cash inflows due to change in scope of consolidation	5,140	-	3,497
Cash outflows from investing activities			
Increase in short-term financial instruments	(368,617)	(121,091)	(250,760)
Acquisition of financial assets at FVOCI	(45)	-	(31)
Increase in guarantee deposits	(2,347)	(4,924)	(1,597)
Increase in long-term guarantee deposits	(1,637)	(2,081)	(1,114)
Increase in short-term loans	(9,754)	(12,845)	(6,635)
Increase in long-term loans	(42)	-	(29)
Increase in long-term financial instruments	(333)	(579)	(226)
Acquisition of property, plant and equipment	(754,427)	(462,382)	(513,216)
Acquisition of intangible assets	(362,747)	(265,777)	(246,767)
Decrease in guarantee deposits received	(725)	(1,299)	(493)
Increase in long-term other receivables	(24)	(5,568)	(16)
Net cash flows used in investing activities	\ (846,138)	\ (27,128)	\$ (575,604)

(Continued)

POSCO International corporation and its subsidiaries
Consolidated statements of cash flows (cont'd)
for each of the two years in the period ended December 31, 2024

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Financing activities			
Cash inflows from financing activities			
Increase in long-term borrowings	\ 328,274	\ 146,694	223,316
Issuance of bonds	701,936	398,614	477,507
Paid-in capital increase of subsidiaries	251,706	31,141	171,229
Disposal of subsidiaries	-	60,637	-
Acquisition and settlement of derivatives	1,936	-	1,317
Others	-	20	-
Cash outflows from financing activities			
Net decrease in short-term borrowings	(56,902)	(344,818)	(38,709)
Repayment of current portion of long-term borrowings	(179,350)	(467,918)	(122,007)
Repayment of long-term borrowings	(92,866)	(5,406)	(63,174)
Redemption of current Portion of bonds	(877,380)	(600,000)	(596,857)
Payment of lease liabilities	(74,629)	(91,511)	(50,768)
Redemption of hybrid bonds	-	(140,000)	-
Dividends paid	(176,609)	(140,314)	(120,142)
Additional acquisition of subsidiary stocks	-	(69,553)	-
Settlement of derivatives	-	(324)	-
Others	(2,190)	(2,635)	(1,490)
Net cash flows used in financing activities	\ (176,074)	\ (1,225,373)	\$ (119,778)
Net decrease in cash and cash equivalents	\ (145,331)	\ (176,065)	\$ (98,865)
Cash and cash equivalents as of January 1	1,136,863	1,297,706	773,376
Net foreign exchange difference	65,672	15,222	44,675
Cash and cash equivalents as of December 31	\ 1,057,204	\ 1,136,863	\$ 719,186

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

1. Corporate information

1.1 The parent company

POSCO International Corporation (the “Company”) was incorporated on December 27, 2000 as a result of a spin-off of the trading segment of Daewoo Corporation.

The Company has listed its shares on the Korea Exchange since March 23, 2001. The Company’s issued capital as of December 31, 2024 amounts to ₩879,614 million. The Company merged with POSCO Energy Co., Ltd. as of January 1, 2023 as the base date for the merger (see Note 35).

The Company engages in various business activities, such as providing international trade, export agency services, intermediary trading, manufacturing, distribution, natural resource development, lease and electric power service. The primary products sold by the Company include various industrial grade steel, metals, chemicals, auto parts, machinery, ships, plants, electronics, special materials, grain and petroleum. In addition, it has and operates an LNG combined thermal power generation facility (with 3,412MW generation capacity) consisting of 13 gas turbines and 7 steam turbines located in Incheon, and operates 6 LNG storage tanks with a storage capacity of 930,000 kℓ at Gwangyang National Industrial Complex.

As of December 31, 2024, POSCO Holdings Inc. is the largest shareholder of the Company, and it has an effective stake of 72.98%.

1.2 Consolidated subsidiaries

Subsidiaries	Business	Number of shares	Country of domicile	Equity ownership (%)	
				Dec. 31, 2024	Dec. 31, 2023
POSCO INTERNATIONAL AMERICA CORP.	Trading	555,000	USA	100	100
POSCO INTERNATIONAL DEUTSCHLAND GMBH	Trading	-	Germany	100	100
POSCO INTERNATIONAL JAPAN CORP.	Trading	209,600	Japan	100	100
POSCO INTERNATIONAL SINGAPORE PTE. LTD.	Trading	3,500,000	Singapore	100	100
POSCO INTERNATIONAL ITALIA S.R.L.	Trading	-	Italy	100	100
POSCO INTERNATIONAL (CHINA) CO., LTD.	Trading	-	China	100	100
POSCO INTERNATIONAL MYANMAR CORPORATION LIMITED	Trading	493,240	Myanmar	100	100
POSCO INTERNATIONAL MEXICO S.A. DE C.V.	Trading	53,078	Mexico	100	100
POSCO INTERNATIONAL MALAYSIA SDN. BHD.	Trading	6,091,002	Malaysia	100	100
POSCO INTERNATIONAL SHANGHAI CO., LTD.	Trading	-	China	100	100
DAEWOO INTERNATIONAL SHANGHAI WAIGAOQIAO CO., LTD.	Trading	-	China	100	100
POSCO INTERNATIONAL INDIA PVT., LTD.	Trading	8,940,000	India	100	100
POSCO INTERNATIONAL VIETNAM CO., LTD.	Trading	-	Vietnam	100	100
POSCO INTERNATIONAL UKRAINE LLC.	Trading	-	Ukraine	100	100
POSCO INTERNATIONAL (THAILAND) CO., LTD.	Trading	1,510,000	Thailand	100	100
POSCO INTERNATIONAL INDONESIA	Trading	112,800	Indonesia	100	100
POS-SEA PTE. LTD.	Trading	1,020,000	Singapore	100	100
POSCO MOBILITY SOLUTION CO., LTD.	Steel manufacturing	1,000,000	Korea	100	100
POSCO INTERNATIONAL TEXTILE LLC.	Cotton	-	Uzbekistan	100	100
	Natural resource				
POSCO INTERNATIONAL AUSTRALIA HOLDINGS PTY. LTD.	development	119,676,667	Australia	100	100
PI AAPC CORP.	Steel manufacturing	5,000	USA	100	100
PT. BIO INTI AGRINDO	Natural resource	496,333	Indonesia	85	85
	development				
BRASIL SAO PAULO STEEL PROCESSING CENTER	Steel manufacturing	-	Brazil	51	51
POSCO INTERNATIONAL POWER (PNGLA) LTD. (*7)	Service	-	Papua New Guinea	-	100
POHANG SRDC CO., LTD.	Steel manufacturing	909,979	Korea	51	51
	Grain crop/				
GOLDEN LACE POSCO INTERNATIONAL CO., LTD.	Wholesales	60,000	Myanmar	60	60
POSCO INTERNATIONAL GLOBAL DEVELOPMENT PTE. LTD.	Hotel	254,117,647	Singapore	75	75
POSCO INTERNATIONAL AMARA CO., LTD.	Hotel	680,000	Myanmar	64	64
	Natural resource				
PT POSCO INTERNATIONAL E&P INDONESIA (*4)	development	189,878	Indonesia	100	100
POSCO INTERNATIONAL INDIA E-MOBILITY (*6)	Steel manufacturing	876,041	India	74	74
GRAIN TERMINAL HOLDING PTE. LTD.	Grain	100	Singapore	100	75
MYKOLAIV MILLING WORKS PJSC	Grain	-	Ukraine	100	75
Yuzhnaya Stevedoring Company Limited LLC.	Grain	-	Ukraine	100	75
SUZHOU POSCO-CORE TECHNOLOGY CO., LTD.	Steel manufacturing	-	China	72	72

1.2 Consolidated subsidiaries (cont'd)

Subsidiaries	Business	Number of shares	Country of domicile	Equity ownership (%)	
				Dec. 31, 2024	Dec. 31, 2023
POSCO INTERNATIONAL E&P MALAYSIA SDN. BHD.	Natural resource development	58,221,713	Malaysia	100	100
AGPA PTE. LTD.	Grain	92,388,487	Singapore	100	100
SENEX HOLDINGS PTY LTD. (*1) (*2)	Natural resource development	714,077,304	Australia	50	50
POSCO INTERNATIONAL MEXICO E-MOBILITY ESTEEL4U CO., LTD.	Steel manufacturing	2,845,916	Mexico	100	100
PT. KRAKATAU POSCO ENERGY (*3)	Steel manufacturing	588,200	Korea	61	61
TANCHEON E&E CO., LTD. (*3)	By-product combined power generation	45,705,000	Indonesia	55	55
Korea Fuel Cell Co., Ltd. (*3)	Heat supply	4,300,000	Korea	100	100
Shinan Green Energy Co., Ltd. (*3)	Maintenance of fuel cell business facilities	10,000,000	Korea	100	100
NEH Co., Ltd. (*3)	Wind power generation	45,517,744	Korea	55	55
PT AGPA REFINERY COMPLEX (*4)	LNG Terminal operation	7,604,165	Korea	100	100
POSCO INTERNATIONAL POLAND E-MOBILITY SP. Z.O.O., (*4)	Oil and fat manufacturing	490,876	Indonesia	60	60
POSCO INTERNATIONAL POLAND E-MOBILITY SP. Z.O.O., (*4)	Steel manufacturing	1,331,047	Poland	100	100
POSCO INTERNATIONAL E&P USA Inc. (*4)	Natural resource development	1,000	USA	100	100

(*1) SENEX HOLDINGS PTY LTD. includes 19 subsidiaries including Senex Energy Limited.

(*2) As of December 31, 2024, although the ownership ratio over the entity is 50.1%, it is classified as a subsidiary as the Company is deemed to have control over the entity in substance in accordance with the shareholders' agreement.

(*3) These companies were incorporated into the subsidiaries as POSCO Energy Co., Ltd.'s business unit was merged in for the year ended December 31, 2023.

(*4) The entities were newly incorporated for the year ended December 31, 2023.

(*5) For the year ended December 31, 2024, POSCO MOBILITY SOLUTION POLAND Sp. z o.o., changed its name to POSCO INTERNATIONAL POLAND E-MOBILITY SP. Z.O.O.

(*6) For the year ended December 31, 2024, POSCO TMC INDIA Private Limited changed its name to POSCO INTERNATIONAL INDIA E-MOBILITY.

(*7) It was disposed of for the year ended December 31, 2024.

1.3 Summarized financial information of the subsidiaries

The summarized financial information on the Group's subsidiaries as of and for the year ended December 31, 2024 is as follows (Korean won in millions):

Subsidiaries	Assets	Liabilities	Equity	Sales	Net profit (loss)
POSCO INTERNATIONAL AMERICA CORP.	726,447	489,622	236,825	2,651,352	54,727
POSCO INTERNATIONAL DEUTSCHLAND GmbH	503,928	488,965	14,963	1,099,624	(2,776)
POSCO INTERNATIONAL JAPAN CORP.	998,144	821,148	176,996	2,966,044	21,235
POSCO INTERNATIONAL SINGAPORE PTE. LTD.	217,545	194,011	23,534	3,225,062	6,560
POSCO INTERNATIONAL ITALIA S.R.L.	291,810	271,429	20,381	862,642	2,321
POSCO INTERNATIONAL (CHINA) CO., LTD.	35,604	4,001	31,603	165,997	957
POSCO INTERNATIONAL MYANMAR CORPORATION LIMITED	1,469	988	481	334	(49)
POSCO INTERNATIONAL MEXICO S.A. DE C.V.	255,109	191,690	63,419	738,406	29,089
POSCO INTERNATIONAL MALAYSIA SDN. BHD.	21,819	16,375	5,444	145,039	665
POSCO INTERNATIONAL SHANGHAI CO., LTD.	77,635	71,546	6,089	344,526	(4,513)
DAEWOO INTERNATIONAL SHANGHAI WAIGAOQIAO CO., LTD.	9,664	6,120	3,544	53,195	1,416
POSCO INTERNATIONAL INDIA PVT., LTD.	11,558	19,785	(8,227)	3,233	(807)
POSCO INTERNATIONAL VIETNAM CO., LTD.	39,761	30,099	9,662	402,008	1,030
POSCO INTERNATIONAL UKRAINE LLC.	3,476	4,962	(1,486)	178	(699)
POSCO INTERNATIONAL (THAILAND) CO., LTD.	54,236	37,953	16,283	183,649	790

1.3 Summarized financial information of the subsidiaries (cont'd)

Subsidiaries	Assets	Liabilities	Equity	Sales	Net profit (loss)
PT POSCO INTERNATIONAL INDONESIA	42,975	24,011	18,964	156,277	1,696
POS-SEA PTE LTD	8,776	17,929	(9,153)	-	(559)
POSCO MOBILITY SOLUTION CO., LTD.	957,411	406,888	550,523	1,179,247	(35,088)
POSCO INTERNATIONAL TEXTILE LLC.	101,689	43,471	58,218	70,762	(29,669)
POSCO INTERNATIONAL AUSTRALIA HOLDINGS PTY LTD	103,442	5,788	97,654	38,301	6,443
PT. BIO INTI AGRINDO	360,303	158,979	201,324	226,484	61,223
BRASIL SAO PAULO STEEL PROCESSING CENTER	2,734	37,772	(35,038)	-	(7,621)
POHANG SRDC CO., LTD.	15,127	5,140	9,987	7,277	481
GOLDEN LACE POSCO INTERNATIONAL CO., LTD.	17,175	26,517	(9,342)	24,796	(6,547)
POSCO INTERNATIONAL GLOBAL DEVELOPMENT PTE. LTD.	286,662	324,072	(37,410)	-	(35,991)
POSCO INTERNATIONAL AMARA CO., LTD.	322,963	479,031	(156,068)	43,629	(45,325)
PT POSCO INTERNATIONAL E&P INDONESIA	17,530	1,372	16,158	-	(1,638)
POSCO INTERNATIONAL INDIA E-MOBILITY	26,480	17,605	8,875	55,726	1,386
GRAIN TERMINAL HOLDING PTE. LTD.	51,659	70,105	(18,446)	-	(43,790)
MYKOLAIV MILLING WORKS PJSC	47,946	87,268	(39,322)	89	(11,669)
YUZHNAVYA STEVEDORING COMPANY LIMITED LLC.	18,291	652	17,639	-	(1,971)
SUZHOU POSCO-CORE TECHNOLOGY CO., LTD.	98,195	37,710	60,485	104,495	(31,480)
POSCO INTERNATIONAL E&P MALAYSIA SDN. BHD.	11,611	582	11,029	-	(2,978)
AGPA PTE. LTD.	183,822	298	183,524	-	30,765
SENEX HOLDINGS PTY LTD	2,269,190	910,149	1,359,041	268,350	16,389
POSCO INTERNATIONAL MEXICO E-MOBILITY	164,029	86,475	77,554	23,426	(14,044)
ESTEEL4U	148,565	141,941	6,624	578,859	2,644
PT.KRAKATAU POSCO ENERGY	296,567	89,437	207,130	34,777	12,578
TANCHEON E&E CO., LTD.	28,251	842	27,409	7,269	3,055
Korea Fuel Cell	116,426	21,324	95,102	20,433	(26,582)
Shinan green energy Co., Ltd.	141,415	142,093	(678)	13,831	(12,745)
NEH Co., Ltd.	467,229	84,504	382,725	-	2,111
PT AGPA REFINERY COMPLEX	130,425	3,538	126,887	-	(1,580)
POSCO INTERNATIONAL POLAND E-MOBILITY SP. Z.O.O.,	47,563	2,782	44,781	-	(2,404)
POSCO INTERNATIONAL E&P USA INC.	146	-	146	-	(335)

The financial information of PI AAPC CORP. is not presented as it is not material to the Group's consolidated financial statements.

2. Basis of preparation and summary of material accounting policies

2.1 Basis of preparation

The Company and its subsidiaries (collectively referred to as, the “Group”) prepare the statutory financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (“KIFRS”) enacted by the *Act on External Audit of Stock Companies*.

The consolidated financial statements have been prepared on a historical cost basis, except for derivative financial instruments, debt and equity instruments that have been measured at fair value. The carrying values of assets and liabilities that are designated as hedged items in fair value is not recorded at amortized cost but recorded reflecting changes in the fair values attributable to the risks that are being hedged. The consolidated financial statements are presented in Korean won (KRW), and the financial statements are presented in Korean won in thousands while all of notes in Korean won in millions, except when otherwise indicated.

The accompanying consolidated financial statements for each of the two years in the period ended December 31, 2024 have been translated into United States dollars solely for the convenience of the reader. The exchange rate used was the won/dollar exchange rate on December 31, 2024 which is 1,470.00 Won/Dollar.

2.1.1 Basis of consolidation

The consolidated financial statements comprise the financial statements of the Group and its subsidiaries as of December 31 of each financial year. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee, if and only if, the Group has:

- power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee);
- exposure, or rights, to variable returns from its involvement with the investee; and
- the ability to use its power over the investee to affect its returns.

When the Group has less than a majority of the voting rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- the contractual arrangement between with the other vote holders;
- rights arising from other contractual arrangements; and
- the Group’s voting rights and potential voting rights.

The Group re-assesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the date the Group gains control until the date the Group ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income (“OCI”) are attributed to the equity holders of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group’s accounting policies. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full.

Transactions within the Group, related balances, income and expenses, and unrealized gains and losses are all removed when preparing the consolidated financial statements. On the other hand, the Group removes the share of the unrealized profits generated from transactions with equity-accounted investees, and unrealized losses are eliminated in the same way as unrealized profits if there is no evidence of asset impairment.

2.2 Summary of material accounting policies

2.2.1 Business combinations and Goodwill

The Group accounts for business combinations under the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value and the amount of any non-controlling interest in the acquiree. For each business combination, the acquirer measures the non-controlling interest in the acquiree at fair value or a proportionate share of the non-controlling interest in the acquiree's identifiable net assets. Acquisition-related costs are expensed when incurred.

2.2.2 Investment in associates and joint ventures

Joint arrangements in which two or more parties have joint control are classified as joint operations or joint ventures. Joint operators have rights and obligations regarding the assets and liabilities of the joint operation and recognize their share of the joint operation's assets, liabilities, revenues and expenses of the joint operation. Participants in a joint venture have the right to the net assets of the joint venture and apply the equity method.

2.2.3 Fair value measurement

The Group measures financial instruments such as derivatives at fair value as of the reporting date. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- in the principal market for the asset or liability; or
- in the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible by the Group.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the consolidated financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement:

- Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities;
- Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable; and
- Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

For assets and liabilities that are recognized in the consolidated financial statements at fair value on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization based on the lowest level input that is significant to the fair value measurement at each reporting date.

For the purpose of fair value disclosures, the Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy.

2.2.3 Fair value measurement (cont'd)

Fair value related disclosures for financial instruments and non-financial assets that are measured at fair value or where fair values are disclosed, are summarized in the following notes:

	Notes
Valuation methods, significant estimates and assumptions;	2, 6 and 30
Quantitative disclosures of fair value measurement hierarchy;	30
Investment properties; and	13
Financial instruments (including those carried at amortized cost).	6 and 30

2.2.4 Revenue from contracts with customers

Revenue from contracts with customers is recognized when control of the goods or services are transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services.

2.2.4.1 Trading sector

(1) Classification and implementation of performance obligations

Performance obligations are identified in certain contracts with respect to (1) the sale of goods, and (2) transport services for the performance of their duties as part of their trade transactions with customers. The Group recognizes the transaction price allocated to these performance obligations as revenue upon completion of each performance obligation by applying the expected cost plus margin approach.

For the transactions of custom-made equipment, if the Group has no alternative use for assets created by fulfilling obligations and the Group has the enforceable right for the payment for the portion completed up to now, the revenue is recognized by the percentage-of-completion methods.

The Group provides guarantees for goods and services that are defective at the time of sale in accordance with the requirements of the law. Assurance type guarantees are accounted for in accordance with KIFRS 1037 *Contingent Liabilities and Contingent Assets*. Guarantees of the types of services classified as separate performance obligations are not recognized.

(2) Variable consideration

If the consideration in a contract includes a variable amount, the Group estimates the amount of consideration to which it will be entitled in exchange for transferring the goods to the customer. The variable consideration is estimated at contract inception and is included in the transaction price only to the extent that it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved.

In the case of a contract in which a right of return exists, for goods that are expected to be returned, instead of revenue, the Group recognizes it as a refund liability. A right of goods returned and corresponding adjustment to cost of sales are also recognized. If the Group receives short-term advances from its customers, the practical expedient is used, and the Group does not adjust the promised amount of consideration for the effects of a significant financing component if it expects, at contract inception, that the period between the transfer of the promised good or service to the customer and when the customer pays for that good or service will be one year or less.

(3) Judgment on principal versus agent

The Group controls each good or service prior to providing the goods or services to the customer, taking into account the main responsibilities and obligation of fulfilling the commitments in the trade transaction with the customer, and right to determine prices. Therefore, the Group has generally concluded that it is the principal in its revenue arrangements, except for the agency services, in which sales commission is recognized as revenue.

2.2.4.2 Energy sector

The Group is engaged in the business of providing electricity sales, LNG test operation services, storage facility rental, LNG resale, and fuel cell facility manufacturing and maintenance services.

Product distribution contracts in some of the contracts of the energy transaction are not subject to the standard as the counterparties to the contract are not the "customers" as defined in KIFRS 1115. Revenue from gas sales is recognized when the control of goods is transferred.

(1) Classification and implementation of performance obligations

In the case of the power generation business, the identified performance obligation is a single performance obligation to provide electricity, and the Group recognizes revenue over the period for the provision of electricity, etc.

In the case of LNG test operation services, the Group identifies the performance obligations of providing LNG loading and unloading services and providing LNG, and recognizes revenue for LNG loading and unloading fees as they arise. For LNG sales, revenue is recognized upon transmission in the case of exports, and upon completion of transmission and unloading in the case of domestic sales.

In the case of leasing LNG storage facilities, performance obligations to provide services such as unloading, storage, and transmission of LNG imported by each customer are identified and over the period during which the service is provided, revenue is recognized for fixed costs based on storage capacity and variable costs based on LNG transmission volume.

Additionally, in the case of LNG resale, a single performance obligation to provide LNG is identified, and revenue is recognized when LNG is provided to the customer.

(2) Variable consideration

The Group estimates variable considerations using an expected value method that it expects to better predict the consideration it will receive and recognizes revenue by including variable considerations in the transaction price only up to an amount that is highly likely not to reverse a significant portion of the cumulative revenue already recognized when the uncertainty associated with variable considerations is resolved later.

2.2.4.3 Others

The Group has a rental division in addition to the divisions described above, and the relevant goods or services are recognized as revenue at the time of transfer of control, and leases are recognized as revenue during the rental period.

2.2.5 Cash and cash equivalents

Cash and cash equivalents in the consolidated statement of financial position comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less.

2.2.6 Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

2.2.6.1 Financial assets

(1) Initial recognition and measurement

Financial assets are classified, at initial recognition, as subsequently measured at amortized cost, fair value through other comprehensive income (OCI), and fair value through profit or loss.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient, the Group initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs. Trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient are measured at the transaction price determined under KIFRS 1115.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognized on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

(2) Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in four categories:

- financial assets at amortized cost (debt instruments);
- financial assets at fair value through OCI with recycling of cumulative gains and losses (debt instruments);
- financial assets designated at fair value through OCI with no recycling of cumulative gains and losses upon derecognition (equity instruments); and
- financial assets at fair value through profit or loss.

Financial assets at amortized cost (debt instruments)

Financial assets at amortized cost are subsequently measured using the effective interest rate ("EIR") method and are subject to impairment. Gains and losses are recognized in profit or loss when the asset is derecognized, modified or impaired.

2.2.6.1 Financial assets (cont'd)

The Group's financial assets measured at amortized cost include cash and cash equivalents, trade receivables and other financial assets.

Financial assets designated at fair value through OCI (equity instruments)

Upon initial recognition, the Group can elect to classify irrevocably its equity investments as equity instruments designated at fair value through OCI when they meet the definition of equity under KIFRS 1032 *Financial Instruments: Presentation* and are not held for trading.

Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognized as other income in the consolidated statement of profit or loss when the right of payment has been established, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in OCI. Equity instruments designated at fair value through OCI are not subject to impairment assessment.

The Group elected to classify irrevocably its non-listed equity investments under this category.

Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss include financial assets held for trading and financial assets upon initial recognition designated at fair value through profit or loss or required at fair value. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. Derivatives, including separated embedded derivatives, are also classified as held for trading unless they are designated as effective hedging instruments. Financial assets with cash flows that are not solely payments of principal and interest are classified and measured at fair value through profit or loss, irrespective of the business model. Notwithstanding the criteria for debt instruments to be classified at amortized cost or at fair value through OCI, as described above, debt instruments may be designated at fair value through profit or loss on initial recognition if doing so eliminates, or significantly reduces, an accounting mismatch.

Financial assets at fair value through profit or loss are carried in the consolidated statement of financial position at fair value with net changes in fair value recognized in profit or loss.

Derivatives and the listed equity investments that were not elected to classify to financial assets at fair value through OCI are included in this category. Dividends on the listed equity investments are recognized as profit or loss when the right is confirmed.

A derivative embedded in a hybrid contract is separated from the host and accounted for as a separate derivative if: the economic characteristics and risks are not closely related to the host; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the hybrid contract is not measured at fair value through profit or loss. Embedded derivatives are measured at fair value with changes in fair value recognized in profit or loss. Reassessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows or a reclassification of a financial asset out of the fair value through profit or loss category.

A derivative embedded within a hybrid contract containing a financial asset host is not accounted for separately. The financial asset host together with the embedded derivative is required to be classified in its entirety as a financial asset at fair value through profit or loss.

2.2.6.1 Financial assets (cont'd)

(3) Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognized (i.e., removed from the Group's consolidated statement of financial position) when:

- the rights to receive cash flows from the asset have expired; or
- the Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, the Group continues to recognize the transferred asset to the extent of its continuing involvement. In that case, the Group also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

(4) Impairment of financial assets

Disclosures related to impairment of financial assets are provided the Notes below:

- Disclosures for significant assumptions;
- Debt instruments at fair value through OCI; and
- Trade receivables, including contract assets.

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

For debt instruments at fair value through OCI, the Group applies the low credit risk simplification. At every reporting date, the Group evaluates whether the debt instrument is considered to have low credit risk using all reasonable and supportable information that is available without undue cost or effort. In making that evaluation, the Group reassesses the internal credit rating of the debt instrument. In addition, the Group considers that there has been a significant increase in credit risk when contractual payments are more than 30 days past due.

The Group's debt instruments at fair value through OCI comprise solely of quoted bonds that are graded in the top investment category by the credit rating agency and, therefore, are considered to be low credit risk investments. It is the Group's policy to measure ECLs on such instruments on a 12-month basis. However, when there has been a significant increase in credit risk since initial recognition, the allowance will be based on the lifetime ECL. The Group uses the ratings from the credit rating agency both to determine whether the debt instrument has significantly increased in credit risk and to estimate ECLs.

The Group considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

2.2.6.2 Financial liabilities

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

2.2.6.3 Offsetting of financial instruments

Financial assets and financial liabilities are offset, and the net amount is reported in the consolidated statement of financial position if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

2.2.6.4 Derivative financial instruments and hedge accounting

(1) Initial recognition and subsequent measurement

The Group uses derivative financial instruments, such as forward currency contracts, interest rate swaps and forward commodity contracts, to hedge its foreign currency risks, interest rate risks and commodity price risks, respectively. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

For the purpose of hedge accounting, hedges are classified as:

- fair value hedges when hedging the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment;
- cash flow hedges when hedging the exposure to variability in cash flows that is either attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction or the foreign currency risk in an unrecognized firm commitment; and
- hedges of a net investment in a foreign operation.

(2) Fair value hedges

The change in the fair value of a hedging derivative is recognized in the statement of profit or loss. The change in the fair value of the hedged item attributable to the risk hedged is recorded as part of the carrying value of the hedged item and is also recognized in the statement of profit or loss.

For fair value hedges relating to items carried at amortized cost, any adjustment to carrying value is amortized through profit or loss over the remaining term of the hedge using the EIR method. EIR amortization may begin as soon as an adjustment exists and no later than when the hedged item ceases to be adjusted for changes in its fair value attributable to the risk being hedged.

When an unrecognized firm commitment is designated as a hedged item, the subsequent cumulative change in the fair value of the firm commitment attributable to the hedged risk is recognized as an asset or liability with a corresponding gain or loss recognized in profit and loss.

2.2.6.4 Derivative financial instruments and hedge accounting (cont'd)

(3) Cash flow hedges

The effective portion of the gain or loss on the hedging instrument is recognized in OCI in the cash flow hedge reserve, while any ineffective portion is recognized immediately in the statement of profit or loss. The cash flow hedge reserve is adjusted to the lower of the cumulative gain or loss on the hedging instrument and the cumulative change in fair value of the hedged item.

The Group uses forward currency contracts as hedges of its exposure to foreign currency risk in forecast transactions and firm commitments, as well as forward commodity contracts for its exposure to volatility in the commodity prices. The ineffective portion relating to foreign currency contracts is recognized as other expense and the ineffective portion relating to commodity contracts is recognized in other operating income or expenses.

The Group designates only the spot element of forward contracts as a hedging instrument. The forward element is recognized in OCI and accumulated in a separate component of equity under cost of hedging reserve.

The amounts accumulated in OCI are accounted for, depending on the nature of the underlying hedged transaction. If the hedged transaction subsequently results in the recognition of a non-financial item, the amount accumulated in equity is removed from the separate component of equity and included in the initial cost or other carrying amount of the hedged asset or liability. This is not a reclassification adjustment and will not be recognized in OCI for the period. This also applies where the hedged forecast transaction of a non-financial asset or non-financial liability subsequently becomes a firm commitment for which fair value hedge accounting is applied.

For any other cash flow hedges, the amount accumulated in OCI is reclassified to profit or loss as a reclassification adjustment in the same period or periods during which the hedged cash flows affect profit or loss.

If cash flow hedge accounting is discontinued, the amount that has been accumulated in OCI must remain in accumulated OCI if the hedged future cash flows are still expected to occur. Otherwise, the amount will be immediately reclassified to profit or loss as a reclassification adjustment. After discontinuation, once the hedged cash flow occurs, any amount remaining in accumulated OCI must be accounted for depending on the nature of the underlying transaction as described above.

2.2.7 Inventories

Inventories are valued at the lower of cost and net realizable value. Acquisition costs for each inventory include purchase cost, conversion cost and other costs attributable to bringing the inventory to the location and condition. The unit cost of inventories is determined by the first-in-first-out method (Materials-in-transit) and the weighted average method (Finished goods and Work-in-process).

2.2.8 Non-current assets held for sale

The Group classifies non-current assets held for sale when non-current assets (or disposal groups) are expected to be mainly recovered through sale transactions or distribution rather than continued use, and when they are immediately available and highly likely to be sold.

2.2.9 Property, plant and equipment

Property, plant and equipment is stated at cost, net of accumulated depreciation and/or accumulated impairment losses, if any. These costs include alternative costs that meet the asset recognition criteria and borrowing costs for long-term construction projects. If a major part of an item of property, plant and equipment needs to be replaced periodically, the Group recognizes that part as an individual asset and depreciates it over its useful life. In addition, if an asset meets the recognition criteria, such as comprehensive inspection costs, it is included in the carrying amount of the property, plant and equipment, and all repair and maintenance costs are reflected in profit or loss when incurred. The present value of the expenditure is included in the acquisition cost of the property, plant and equipment if the estimated cost of removing, dismantling, or restoring the property to its original state after the economic use is terminated meets the recognition criteria of the provisions.

Land among property, plant and equipment is not depreciated, and property, plant and equipment other than land is estimated by individual assets and then depreciated using a straight-line method over the useful life.

	Useful life (years)
Buildings	9 - 50
Machinery	4 - 25
Structures	5 - 40
Vehicles	4 - 5
Tools	4 - 15
Fixtures	4 - 10
Bearer plants	20

Property, plant and equipment is derecognized on disposal (i.e., the date the acquirer obtains control of the asset) or when future economic benefits are not expected through use or disposal. The gain or loss arising from the removal of property, plant and equipment is determined by the difference between the net selling amount and the carrying amount and is recognized in profit or loss when the asset is derecognized.

The depreciation method, residual value, and useful life of property, plant and equipment are reviewed at the end of each fiscal year and are accounted for as a change in accounting estimates if appropriate.

2.2.10 Investment properties

Investment property is measured at the acquisition cost added to the related transaction cost and includes alternative costs that meet the asset recognition criteria when incurred. However, the costs incurred in daily management activities are recognized as expenses when incurred. Subsequent to initial recognition, investment properties are stated at cost, net of accumulated depreciation and/or accumulated impairment losses.

The depreciation method, residual value and useful life of investment properties are the same as for property, plant and equipment.

2.2.11 Leases

2.2.11.1 Group as a lessee

(1) Right-of-use assets

The Group recognizes the right-of-use asset at the inception of the lease (i.e., when the underlying asset is available). The right-of-use assets are measured at cost and the cost model is applied for subsequent measurement.

If ownership of the leased asset transfers to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

Right-of-use assets are also subject to impairment and are described in the accounting policy for impairment of non-financial assets in Note 2.2.15.

(2) Lease liabilities

At the commencement date of the lease, the Group recognizes lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating the lease, if the lease term reflects the Group exercising the option to terminate.

In calculating the present value of lease payments, the Group uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable.

The Group's lease liabilities are included in the interest-bearing borrowings.

2.2.11.2 Group as a lessor

As a lessor, the Group determines at the inception date whether a lease is a finance lease or an operating lease. To classify a lease, the Group determines whether the lease contract transfers substantially all the risks and rewards of ownership of the underlying asset to the lessee.

In case of operating leases, rental income arising is accounted for on a straight-line basis over the lease terms and is included in revenue in the statement of profit or loss due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized over the lease term on the same basis as rental income. Contingent rents are recognized as revenue in the period in which they are earned.

2.2.12 Intangible assets

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses. Internally generated intangible assets, excluding development costs, are reflected in profit or loss in the period in which the expenditure is incurred.

Intangible assets are divided into intangible assets with finite useful lives and intangible assets with indefinite useful lives, and intangible assets with finite useful lives are amortized over the relevant useful life and are considered for impairment if an indication of impairment is identified. In addition, the useful life and amortization method is reviewed at least at the end of each fiscal year and is accounted for as a change in accounting estimates if changes are needed due to changes in the expected period of use or changes in the expected pattern of consumption of economic benefits. The amortization cost of an intangible asset is reflected in profit or loss as an expense cost item consistent with the function of intangible asset.

2.2.12 Intangible assets (cont'd)

On the other hand, intangible assets with indefinite useful lives are not amortized but are carrying out impairment testing individually or in the cash-generating unit each year. In addition, whether it is appropriate to apply indefinite useful lives to such intangible assets is reviewed each year and, if not, those are changed to finite useful lives in a forward-looking manner.

An intangible asset is derecognized when it is disposed of (i.e., when the acquirer obtains control of the asset) or when no future economic benefits are expected from use or disposal. The Group shall reflect the profit or loss due to the difference between the net selling amount and the carrying amount when the intangible asset is derecognized in profit or loss at the time of derecognition.

2.2.13 Exploration and evaluation assets, development assets, and mining rights

The Group engages in the development of natural resources either by entering into contracts for sharing the extracted natural resources or by acquiring interests in the related projects. Expenditures related to natural resources are recognized as exploration and evaluation assets, development assets or mining rights. The nature of these intangible assets is as follows:

2.2.13.1 Exploration and evaluation assets

Exploration and evaluation assets consist of expenditures for topographical and geophysical studies and drilling and appraisal of oil fields. These assets are reclassified into development assets when the reserves are proven successful.

2.2.13.2 Development assets

Development assets consist of expenditures for fields, construction of production facilities, and others. These development assets are reclassified as mining rights at the inception of the commercial production.

2.2.13.3 Mining rights

Mining rights (production fields) consist of expenditure for improving productivity, oil reservoir management for prediction of oil output and production optimization and increasing the return rate from crude oil. Mining rights are amortized using the unit of production method.

2.2.14 Biological assets

Consumable biological assets for are measured at fair value less costs to sell. The fair value of consumable biological assets is measured by taking into account the expected fruit yield during the evaluation period based on the purchase price of the crop disclosed by the state, and the change in fair value is recognized as sales for the year. Cash flows over the life cycle of consumable biological assets are determined by taking into account the estimated production of agricultural crops and the published prices and estimated cultivation costs of the region in the main market for the crop. For bearer biological assets, it is measured at acquisition cost less accumulated depreciation and accumulated impairment losses.

2.2.15 Impairment of non-financial assets

The Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists or an annual impairment test of the asset is required, the Group estimates the recoverable amount of the asset.

The value of use is assessed as the present value of the estimate of the expected future cash flows of the asset discounted at a pre-tax discount rate that reflects the time value of the currency and the market's assessment of the risk of the asset. Net fair value takes into consideration the latest transaction price. If no such transaction is identified, the decision is made using the appropriate evaluation model. These calculations use valuation multiples, market prices of listed shares, or other fair value indicators.

2.2.15 Impairment of non-financial assets (cont'd)

Impairment losses are reflected in profit or loss as a cost item consistent with the function of the impaired asset. However, if there is previously recognized revaluation surplus as an asset subject to the revaluation model, the impairment loss is offset with the revaluation surplus with the limit of the previous revaluation amount.

2.2.16 Foreign currency translation

The Group's consolidated financial statements are presented in Korean won, which is also the parent company's functional currency. Each entity in the Group determines its own functional currency and items included in the financial statements of each entity are measured using that functional currency. The Group uses the direct consolidation method and reclassifies gains and losses reflecting the amount according to use of the direct consolidation method to profit or loss when disposing of overseas operations.

2.2.16.1 Translation in overseas operations

Assets and liabilities of overseas business sites are converted into Korean won using the exchange rate as of the end of the reporting period, and income statement items are converted into Korean won using the average exchange rate of the current year, and the foreign exchange difference arising from such translation is recognized as a separate item of capital. On the other hand, the cumulative foreign exchange differences recognized in such capital are reflected in profit or loss at the time of disposal of the overseas operations.

2.2.17 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the respective assets. All other borrowing costs are expensed in the period they occur. Borrowing costs consist of interest and other costs incurred in relation to the borrowing of interest funds.

2.2.18 Government grants

Income-related grant is recognized as revenue according to systematic standards over the period necessary to respond to the related costs to be compensated with the grant, and asset-related grant is recognized as deferred income and the same amount is recognized as revenue each year for the useful life of the related assets.

When a non-monetary asset is received as a grant, the Group records the asset and grant as nominal amount and recognizes them as revenue in the income statement at a fixed amount over the estimated useful life of the related asset. The benefits of lower interest rates are recognized as additional government grant when loans with lower interest rates or similar support are provided.

2.2.19 Taxes

The Group is determining whether interest and penalties related to income taxes constitute income taxes. If they are income taxes, KIFRS 1012 *Income Taxes* is applied, and if they are not income taxes, KIFRS 1037 *Provisions, Contingent Liabilities and Contingent Assets* is applied.

2.2.20 Provisions and contingent liabilities

2.2.20.1 Provisions related to post-processing (restoration)

A provision related to post-processing is recognized as the acquisition cost of assets related to resource development, if the project is obliged to be restored at the end of the project. Post-processing costs are calculated as the present value of the expected cost to fulfill the obligation using future expected cash flows, and the future expected cash flows are measured at a pre-tax rate that reflects the inherent risks of the relevant post-processing. The estimated cost of post-processing is reviewed and adjusted at each reporting date, and changes in the estimated cost or the discount rate to be applied are either added to or deducted from the cost of the asset.

2.2.20.2 Onerous contract

If the Group has entered into an onerous contract, the related present obligation is recognized and measured as a provision. Before recognizing a provision for an onerous contract, an impairment loss arising from the asset used to fulfill the onerous contract is recognized first.

An onerous contract is a contract in which the non-avoidable cost of fulfilling the contractual obligations exceeds the economic benefits expected to be received in that contract. The non-avoidable cost is the minimum net cost existing in the contract, which is the lower of the costs required to fulfill the contract and the compensation or penalty to be paid when the contract is not fulfilled.

2.2.21 Greenhouse gas emission rights

2.2.21.1 Greenhouse gas emission rights

Greenhouse gas emission rights consist of emission rights allocated free of charge and purchased emission rights from the government. Emission rights are recognized at cost by adding other costs that are directly related to acquisition and normally incurred to the purchase cost.

The Group holds emission rights for the purpose of fulfilling government submission obligations. Among them, emission rights with a submission date exceeding one year are classified as intangible assets, and emission rights that expire within one year are classified as current assets. Emission rights classified as intangible assets are book value after initial recognition minus the cumulative loss of impairment from cost, and emission rights held to obtain short-term gains from trading are measured at fair value at the end of each reporting period after acquisition, and changes in fair value are recognized as profit or loss.

The greenhouse gas emission rights are derecognized when they cannot be submitted to the government, sold, or used and no longer provide future economic benefits.

2.2.21.2 Emission liabilities

Emission liabilities are current obligations to emit greenhouse gases and submit emissions to the government, and are recognized when resources are likely to be leaked to fulfill the obligation and the amount required to fulfill the obligation can be reliably estimated. They are measured by adding the book value of the credits held for the relevant implementation year to be submitted to the government and the expenditure expected to be required to meet the obligations for emissions exceeding the number of credits held. Emission liabilities are derecognized when they are submitted to the government.

2.2.22 Business combinations under common control

Business combinations under common control are accounted for using the book value method. Assets acquired and liabilities assumed in a business combination are measured at the carrying amount in the consolidated financial statements of the top controlling company. In addition, the difference between the consideration transferred and the carrying amount of the net assets acquired is adjusted in capital surplus.

2.2.23 Operating segment

The Group divides its divisions into segments based on internal reporting data that is periodically reviewed by the top sales decision maker to make decisions about resources to be allocated to each segment and to evaluate the performance of each segment. As described in Note 3, there are two reporting segments, each of which is a strategic operating unit of the Group. Strategic operating units provide different products and services and are operated separately because each business unit requires different technologies and marketing strategies.

2.2.23 Operating segment (cont'd)

Segment information reported to CEO includes items directly attributable to the segment and items that can be reasonably allocated, and the segment's capital expenditures are the total costs incurred for the acquisition of tangible assets and intangible assets (excluding goodwill) during the reporting period.

2.3 Material accounting judgments, estimates and assumptions

The preparation of the Group's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities, as of the reporting date. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods.

Other disclosures relating to the Group's exposure to risks and uncertainties are disclosed in Capital management (Note 31.1) and financial risk management (Note 31.2).

2.3.1 Accounting judgments

In the course of applying the accounting policies of the Group, the management's decisions that had the most significant impact on the amounts recognized in the financial statements are as follows:

2.3.1.1 Calculation of the lease term for contracts with options for extension and termination - accounting as a lessee

The Group determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised.

The Group has lease agreements that include the option for extension and termination. The Group applies judgement when assessing whether it is probable whether it will exercise the option to extend or terminate a lease. In other words, all relevant facts and circumstances that create an economic incentive to exercise the extension option or not to exercise the termination option are taken into account. After the commencement date, the Group reassesses the lease term if there is a significant event or change in circumstances that is within its control and affects its ability to exercise or not to exercise the option to renew or to terminate (for example, significant lease improvements or significant customer customization of the leased asset).

The Group includes the renewal period as part of the lease term for the lease of facilities and machinery with a short non-cancellable period (e.g., 3 to 5 years). If alternative assets are not readily available, it has a significant negative effect on production. Therefore, the Group typically exercises the option to extend the lease. The extended term for a lease of facilities and machinery with a longer non-cancellable term (e.g., 10 to 15 years) is not part of the lease term because it is not probably certain that the extension option will be exercised. In addition, the Group generally leases vehicles and transportation equipment for less than 5 years and does not exercise the option for extension, so the option for extension for leases of vehicles and transportation equipment is not included as part of the lease term. Furthermore, the term during which the termination option is applied is included as part of the lease term only if it is probable that it will not be exercised.

2.3.2 Accounting estimates and changes

Other key sources of uncertainty in important assumptions and estimates for the future as of the end of the reporting period that pose significant risks that could lead to significant adjustments to the carrying amounts of assets and liabilities within the following fiscal year are as follows. Assumptions and estimates are based on available variables at the time of preparation of financial statement. Assumptions on present and future conditions may change due to changes in the market or any conditions out of the control of the Group. When such changes occur, they are reflected in the assumption.

2.3.2.1 Impairment of non-financial assets

The Group assesses at each reporting date whether there is any indication that non-financial assets may be impaired. For goodwill and indefinite-lived intangibles, an impairment test is performed annually or if there is any indication of impairment. For other non-financial assets, an impairment test is performed when there is any indication that the carrying amount will not be recoverable. To calculate the value in use, the management shall estimate the expected future cash flows from the asset or the cash-generating unit and select an appropriate discount rate to calculate the present value of the expected cash flows.

2.3.2.2 Provision for expected credit losses of trade receivables and contract assets

The Group uses a provision matrix to calculate expected credit losses (ECL) for trade receivables and contract assets. The provision setting rate is based on the number of overdue days for a bundle of different customer segments (e.g., regional location, product type, customer type and credit rating, collateral or transaction credit insurance) with similar loss patterns.

The provision matrix is based on the Group's historical observed default rates. The Group will calibrate the matrix to adjust the historical credit loss experience with forward-looking information. For instance, if forecast economic conditions (i.e., gross domestic product) are expected to deteriorate in the future which can lead to an increased number of defaults in the manufacturing sector, the historical default rates are adjusted. At every reporting date, the historical observed default rates are updated and changes in the forward-looking estimates are analyzed.

The assessment of the correlation between historical observed default rates, forecast economic conditions and ECLs is a significant estimate. The amount of ECLs is sensitive to changes in circumstances and of forecast economic conditions. The Group's historical credit loss experience and forecast of economic conditions is not representative of customer's actual default in the future.

2.3.2.3 Pension benefits

The cost and present value of the defined benefit obligation is determined using actuarial valuations. An actuarial valuation involves making various assumptions. It includes the determination of the discount rate, future salary growth rate, mortality rate and future pension increase rate. Due to the complexity of the valuation, the underlying assumptions and its long-term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date.

2.3.2.4 Fair value of financial instruments

Where the fair value of financial assets and financial liabilities recorded in the statement of financial position cannot be derived from active markets, they are determined using valuation techniques including the discounted cash flow (DCF) model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing fair values. The judgments include considerations of inputs such as liquidity risk, credit risk and volatility. Changes in assumptions about these factors could affect the reported fair value of financial instruments.

2.3.2.5 Provisions for restoration

The Group accounts for the provisions for restoration related to resource development. This provision was calculated by applying the cost of removal and discount rates of resource development facilities based on management assumptions and estimates.

2.3.2.6 Lease - Calculation of the incremental borrowing interest rate

The Group cannot readily determine the implicit interest rate of the lease, so it uses the incremental borrowing rate to measure the lease liability. The incremental borrowing interest rate is the interest rate that the Group would have to pay to borrow the funds required to acquire assets of similar value to those of right-of-use assets with similar collateral over a similar period of time in a similar economic environment. Thus, the incremental borrowing interest rate reflects the items that “would have to pay”, which requires estimation when there is no observable rate available (for subsidiaries that do not enter into financing transactions) or when the incremental borrowing interest rate must be adjusted to reflect the lease conditions (for example, if the lease is not in a functional currency of the subsidiary).

The Group shall, if possible, estimate the incremental borrowing interest rate using observable inputs (such as market interest rates) when available and make certain entity-specific estimates (such as the subsidiary’s stand-alone credit rating).

2.4. New and amended standards adopted by the Group

Except for the application of new and revised standards that are first applicable from January 1, 2024, as described below, the Group applies the same accounting policies to its financial statements for the current and comparative periods.

2.4.1 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 material impact on the Group’s consolidated financial statements.

2.4.2 Amendments to KIFRS 1001 - *Classification of Liabilities as Current or Non-current*

The amendments to 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 terms of a liability that could result in its settlement by the transfer of the entity’s own equity instruments do not affect its classification as current or non-current if the entity classifies the option as an equity instrument, recognizing it separately from the liability as an equity component of a compound financial instrument.

In addition, an entity is required to 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 material impact on the Group’s consolidated financial statements.

2.4.3 Amendments to KIFRS 1007 and KIFRS 1107 - *Supplier Finance Arrangements*

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.

As a result of implementing the amendments, the Group has provided additional disclosures about its supplier finance arrangement. Please refer to Note 20.

2.5. New and amended standards not yet adopted by the Group

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's financial statements are disclosed below. The Group did not early apply the following new or revised standards when preparing consolidated financial statements.

2.5.1 Amendments to KIFRS 1021 - *Lack of exchangeability*

The amendments to KIFRS 1021 *The Effects of Changes in Foreign Exchange Rates* specify how an entity should assess whether a currency is exchangeable and how it should determine a spot exchange rate when exchangeability is lacking. The amendments also require disclosure of information that enables users of its financial statements to understand how the currency not being exchangeable into the other currency affects, or is expected to affect, the entity's financial performance, financial position and cash flows.

The amendments will be effective for annual reporting periods beginning on or after January 1, 2025. Early adoption is permitted, but will need to be disclosed. When applying the amendments, an entity doesn't restate comparative information.

The amendments are not expected to have a material impact on the Group's consolidated financial statements.

2.5.2 Amendments to KIFRS 1109 and KIFRS 1107– *Classification and Measurement of Financial Instruments*

The amendments to KIFRS 1109 *Financial Instruments* and KIFRS 1107 *Financial Instruments: Disclosures – Classification and Measurement of Financial Instruments* include the following:

- clarifying that a financial liability is derecognized on the settlement date and introducing an accounting policy choice to derecognize financial liabilities that are settled by using electronic payment system before the settlement date (if specific criteria are met);
- providing additional guidance as to how to assess contractual cash flows of financial assets that include environmental, social and governance (ESG)-linked features and similar features;
- clarifying what constitutes non-recourse features and the characteristics of contractually linked financial instruments; and
- introducing new disclosures for financial instruments with contingent features and adding a disclosure requirement for equity instruments measured at fair value through other comprehensive income.

The amendments will be effective for annual periods beginning on or after January 1, 2026, and are not expected to have a material impact on the consolidated financial statements.

2.5.3 Annual Improvements to KIFRS - Volume 11

Annual Improvements to KIFRS - Volume 11 have been announced for the purpose of improving consistency of requirements set out in each standard, enhancing clarity, and providing better understanding of the amendments.

- Amendments to KIFRS 1101 *First-time adoption of KIFRS: Hedge accounting by a first-time adopter*
- Amendments to KIFRS 1107 *Financial Instruments: Disclosures: Gain or loss on derecognition, Guidance for application of amendments in practice*
- Amendments to KIFRS 1109 *Financial Instruments: Accounting for derecognition of lease liabilities and definition of transaction prices*
- Amendments to KIFRS 1110 *Consolidated Financial Statements: Determination of a 'de facto agent'*
- Amendments to KIFRS 1007 *Statement of Cash Flows: Cost Method*

The amendments will be effective for annual periods beginning on or after January 1, 2026. Earlier adoption is permitted, but will need to be disclosed. The amendments are not expected to have a material impact on the consolidated financial statements.

2.6 Approval of consolidated financial statements

The Group's consolidated financial statements were approved by the Board of Directors dated February 3, 2025, and will be finalized at the general shareholders' meeting on March 24, 2025.

3. Segment information

3.1 Operating segment

For the year ended December 31, 2024, the Group divided the segments provided for management's decision-making into two segments (trading and energy). Accounting policies of each segment are the same as those of the Group mentioned in Note 2.

3.1.1 The financial performance of each segment for each of the two years in the period ended December 31, 2024 is as follows:

	Korean won in millions				U.S. dollar in Thousands
	2024				2024
	Trading	Energy	Consolidation adjustment	Total	Total
Sales	\ 38,962,114	\ 4,139,549	\ -	\ 43,101,663	\$ 29,320,859
Inter-segment sales	(10,759,662)	(1,208)	-	(10,760,870)	(7,320,320)
Net sales	28,202,452	4,138,341	-	32,340,793	22,000,539
Operating profit	495,280	611,675	9,966	1,116,921	759,810

	Korean won in millions				U.S. dollar in Thousands
	2023				2023
	Trading	Energy	Consolidation adjustment	Total	Total
Sales	\ 38,918,339	\ 4,350,454	\ -	\ 43,268,793	\$ 29,434,553
Inter-segment sales	(10,056,795)	(79,177)	-	(10,135,972)	(6,895,219)
Net sales	28,861,544	4,271,277	-	33,132,821	22,539,334
Operating profit (loss)	512,902	659,441	(9,231)	1,163,112	791,233

3.1.2 The financial positions of each segment as of December 31, 2024 and 2023 are as follows:

	Korean won in millions				U.S. dollar in Thousands
	December 31, 2024				Dec. 31, 2024
	Trading	Energy	Consolidation adjustment	Total	Total
Total assets	\ 13,364,976	\ 9,060,126	\ (5,550,429)	\ 16,874,673	\$ 11,479,369
Total liabilities	7,833,763	2,303,694	(2,936,472)	7,200,985	4,898,629

	Korean won in millions				U.S. dollar in Thousands
	December 31, 2023				Dec. 31, 2023
	Trading	Energy	Consolidation adjustment	Total	Total
Total assets	\ 11,946,719	\ 8,695,133	\ (4,483,387)	\ 16,158,465	\$ 10,992,153
Total liabilities	6,381,726	3,291,907	(2,550,772)	7,122,861	4,845,484

3.1.3. Reconciliation

Current taxes, deferred taxes and certain financial assets and financial liabilities are not allocated to individual segments as they are accounted for at the Group level.

3.1.3.1 The reconciliations of assets as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Segment operating assets	\ 16,874,673	\ 16,158,465	\$ 11,479,369
Deferred tax assets	461,653	459,282	314,050
Total assets	\ 17,336,326	\ 16,617,747	\$ 11,793,419

3.1.3.2 The reconciliations of liabilities as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Segment operating liabilities	\ 7,200,985	\ 7,122,861	\$ 4,898,629
Current tax liabilities	53,654	83,549	36,499
Deferred tax liabilities	47,391	45,752	32,239
Current portion of bonds	1,117,736	876,709	760,365
Non-current bonds	1,567,097	1,864,115	1,066,052
Total liabilities	\ 9,986,863	\ 9,992,986	\$ 6,793,784

3.2 Revenue from the contract with customers

Details of classification of sales except for rental revenue from investment properties of \ 11,921 million (\$8,110 thousand) for the year ended December 31, 2024 (2023: \ 12,310 million (\$8,374 thousand)) for each of the two years in the period ended December 31, 2024 are as follows:

3.2.1 Categorization of sales based on the geographical locations

	Korean won in millions			U.S. dollar in thousands
	2024			2024
	Total sales	Inter-segment sales	Net sales	Net sales
Domestic	\ 6,869,195	\ (1,238,650)	\ 5,630,545	\$ 3,830,303
Asia (excluding China)	19,884,672	(4,981,696)	14,902,976	10,138,079
China	3,259,391	(181,924)	3,077,467	2,093,515
North America	5,068,294	(2,252,191)	2,816,103	1,915,716
Europe	4,868,963	(1,931,973)	2,936,990	1,997,952
Others	3,139,227	(174,436)	2,964,791	2,016,865
Total sales	\ 43,089,742	\ (10,760,870)	\ 32,328,872	\$ 21,992,430
U.S. dollar in thousands	\$ 29,312,750	\$ (7,320,320)	\$ 21,992,430	

	Korean won in millions			U.S. dollar in thousands
	2023			2023
	Total sales	Inter-segment sales	Net sales	Net sales
Domestic	\ 8,333,885	\ (1,162,031)	\ 7,171,854	\$ 4,878,812
Asia (excluding China)	18,820,584	(4,988,943)	13,831,641	9,409,280
China	3,621,686	(194,732)	3,426,954	2,331,261
North America	4,326,088	(1,903,385)	2,422,703	1,648,097
Europe	4,634,851	(1,687,914)	2,946,937	2,004,719
Others	3,519,389	(198,967)	3,320,422	2,258,791
Total sales	\ 43,256,483	\ (10,135,972)	\ 33,120,511	\$ 22,530,960
U.S. dollar in thousands	\$ 29,426,179	\$ (6,895,219)	\$ 22,530,960	

3.2.2 Categorization of sales based on the major product and services

	Korean won in millions	U.S. dollar in thousands
	2024	2024
Steel	\ 32,636,100	\$ 22,201,429
Energy	4,139,549	2,816,020
Food material	6,289,123	4,278,315
Others	24,970	16,986
Total sales	\ 43,089,742	\$ 29,312,750
Inter-segment sales	(10,760,870)	(7,320,320)
Total	\ 32,328,872	\$ 21,992,430

	Korean won in millions	U.S. dollar in thousands
	2023	2023
Steel	\ 33,332,558	\$ 22,675,210
Energy	4,350,454	2,959,493
Food material	5,572,313	3,790,689
Others	1,158	788
Total sales	\ 43,256,483	\$ 29,426,180
Inter-segment sales	(10,135,972)	(6,895,219)
Total	\ 33,120,511	\$ 22,530,961

3.2.3 Categorization of sales based on the type of transactions

	Korean won in millions	U.S. dollar in thousands
	2024	2024
Export	\ 12,416,073	\$ 8,446,308
Domestic	5,983,048	4,070,101
Triangular (*1)	24,690,621	16,796,341
Total sales	\ 43,089,742	\$ 29,312,750
Inter-segment sales	(10,760,870)	(7,320,320)
Net sales	\ 32,328,872	\$ 21,992,430

	Korean won in millions	U.S. dollar in thousands
	2023	2023
Export	\ 12,574,872	\$ 8,554,335
Domestic	7,288,580	4,958,218
Triangular (*1)	23,393,031	15,913,627
Total sales	\ 43,256,483	\$ 29,426,180
Inter-segment sales	(10,135,972)	(6,895,219)
Net sales	\ 33,120,511	\$ 22,530,961

(*1) Triangular transactions mean the transaction where the Group purchases products from a supplier in a country other than Korea and sells them to customers located overseas.

3.2.4 Categorization of sales based on the timing of revenue recognition

	Korean won in millions	U.S. dollar in thousands
	2024	2024
Temporary sales	\ 39,533,309	\$ 26,893,407
Sales for the period	3,556,433	2,419,342
Total sales	\ 43,089,742	\$ 29,312,749
Inter-segment sales	(10,760,870)	(7,320,320)
Net sales	\ 32,328,872	\$ 21,992,429

	Korean won in millions	U.S. dollar in thousands
	2023	2023
Temporary sales	\ 39,481,253	\$ 26,857,995
Sales for the period	3,775,230	2,568,184
Total sales	\ 43,256,483	\$ 29,426,179
Inter-segment sales	(10,135,972)	(6,895,219)
Net sales	\ 33,120,511	\$ 22,530,960

3.3 Information about key customers

There are no external customers accounting for more than 10% of the Group's sales for each of the two years in the period ended December 31, 2024.

3.4 Contract balance

Details of contract assets and liabilities arising from revenue from contracts with customers for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions				U.S. dollar in thousands
	2024				2024
	Beginning balance	Increase due to merger	Increase (Decrease)	Ending balance	Ending balance
Contract assets:					
Due from customers	\ 14,855	\ -	\ (11,485)	\ 3,370	\$ 2,293
Contract liabilities:					
Advances received	107,705	-	2,195	109,900	74,762
Unearned revenues	45,441	-	29,130	74,571	50,729

	Korean won in millions				U.S. dollar in thousands
	2023				2023
	Beginning balance	Increase due to merger	Increase (Decrease)	Ending balance	Ending balance
Contract assets:					
Due from customers - trading	\ 29,441	\ -	\ (14,586)	\ 14,855	\$ 10,105
Contract liabilities (*1):					
Advances received - trading	124,776	-	(17,931)	106,845	72,684
Advances received - energy	-	1,800	(940)	860	585
Long-term advances received - trading	1,890	-	(1,890)	-	-
Unearned revenues - trading	68,315	-	(31,965)	36,350	24,728
Unearned revenues - energy	-	11,534	(2,443)	9,091	6,184

(*1) Due to the increase in POSCO Energy's unearned revenues from the merger in 2023, the increase and decrease in trading and energy were separated.

4. Cash and cash equivalents

4.1 The Group's cash and cash equivalents are managed in the same amount in the consolidated statements of financial position and cash flows. Details of cash and cash equivalents as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Cash	\ 5,508	\ 5,598	\$ 3,747
Savings account and checking account	653,153	862,945	444,322
Other cash equivalents	398,543	268,320	271,118
Total	\ 1,057,204	\ 1,136,863	\$ 719,187

4.2 Restricted deposits

As of December 31, 2024 and 2023, the Group holds \ 42,427 million (\$28,862 thousand) and \ 57,201 million (\$38,912 thousand), respectively, in cash and cash equivalents that are restricted in use due to financial agreements, collateral provisions and others.

5. Trade and other receivables

5.1 Details of trade and other receivables as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Current			
Trade receivables	\ 4,212,149	\ 4,174,528	\$ 2,865,407
Allowance for doubtful accounts	(29,077)	(61,704)	(19,780)
Other receivables	237,984	248,080	161,894
Allowance for doubtful accounts	(7,478)	(13,485)	(5,087)
Accrued income	62,424	71,994	42,465
Allowance for doubtful accounts	(161)	(3,576)	(110)
Guarantee deposits	8,430	16,609	5,735
Short-term loans	1,910	3,665	1,299
Current portion of finance lease receivables	25,292	29,438	17,205
Current portion of long-term loans	13	1,903	9
	\ 4,511,486	\ 4,467,452	\$ 3,069,037
Non-current			
Long-term trade receivables	\ 9,094	\ 22,398	\$ 6,186
Allowance for doubtful accounts	(6,782)	(16,766)	(4,614)
Long-term loans	3,844	7	2,615
Long-term other receivables	169,572	140,324	115,355
Allowance for doubtful accounts	(131,504)	(93,291)	(89,459)
Long-term finance lease receivables	303,161	283,009	206,232
Long-term guarantee deposits	19,149	18,680	13,027
Allowance for doubtful accounts	(20)	(54)	(14)
	\ 366,514	\ 354,307	\$ 249,328
	\ 4,878,000	\ 4,821,759	\$ 3,318,365

5.2 Changes in allowances for doubtful accounts related to trade receivables for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Beginning balance	\ 78,470	\ 72,267	\$ 53,381
Increase due to business combination	-	31,960	-
Reversal of allowance for doubtful accounts	(17,648)	(24,122)	(12,005)
Write-off	(25,291)	-	(17,205)
Foreign exchange translation loss(profit)	328	(1,539)	223
Others	-	(96)	-
Ending balance	\ 35,859	\ 78,470	\$ 24,394

5.3 Financial assets transferred but not derecognized

As of December 31, 2024 and 2023, the Group continues to recognize the book value of discounted trade receivables amounting to \ 74,804 million (\$50,887 thousand) and \ 98,704 million (\$67,146 thousand), respectively, and cash received through discounts was recognized as collateral borrowing.

The Group transferred the above trade receivables on the condition that the transferee has the right of recourse, and therefore continues to bear credit risks such as default by the debtor arising from ownership of the trade receivables even after the transfer. The fair values of the above receivables transferred and the related borrowings are not significantly different from their book values.

6. Other financial assets

6.1 Details of other current financial assets as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Financial assets at FVPL (*1)	\ 55,212	\ 134,915	\$ 37,559
Deposits in financial institutions	71,716	108,368	48,786
Total	\ 126,928	\ 243,283	\$ 86,345

(*1) The Group classifies assets with maturities exceeding three months among its other financial assets including MMW as financial assets at FVPL.

6.2 Details of other non-current financial assets as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Financial assets measured at amortized cost	\ -	\ 3,001	\$ -
Financial assets at FVOCI (equity instruments)	42,494	53,887	28,907
Financial assets at FVPL (long-term investment)	437	1,782	297
Financial assets at FVPL (other securities)	12	4,849	8
Deposits in financial institutions	14,595	14,025	9,929
Total	\ 57,538	\ 77,544	\$ 39,141

6.2.1 Financial instruments at fair value

Details of financial instruments measured at fair value as of December 31, 2024 and 2023 are as follows:

							U.S. Dollar in thousand
Korean won in million							
Dec. 31, 2024							Dec. 31, 2023
	Number of shares	Equity owner- ship (%)	Acquisition cost	Fair value or net asset value	book value	book value	book value
Financial assets at FVOCI (equity securities)							
Marketable securities							
Maruichi Steel Tube Ltd.	120,000	0.14	\ 2,933	\ 3,930	\ 3,930	\ 4,018	\$ 2,673
Kumho Petro Chemical Co., Ltd.	37,000	0.13	8,063	3,352	3,352	4,917	2,280
Northwest Copper Corp. (*1)	-	0	-	-	-	3,041	-
FuelCell Energy, Inc. (*1)	-	0	-	-	-	132	-
			\ 10,996	\ 7,282	\ 7,282	\ 12,108	\$ 4,953
Non-marketable securities							
Daewoo Songdo development (*1)	-	-	-	-	-	-	-
Zyle Motor Sales Corp. (*1)	-	-	-	-	-	3	-
DW Development Co., Ltd. - Engineering & Construction (Common Share) (*1)	-	-	-	-	-	2	-
DW Development Co., Ltd. - Engineering & Construction (Preferred Share) (*1)	-	-	-	-	-	-	-
N.I. CO., LTD. (*1)	-	-	-	-	-	-	-
The Korea Economic Daily	178,881	0.96	1,952	974	974	974	663
Hanmi ADM Co., Ltd.	10,000	12.57	1,000	1,000	1,000	1,000	680
S&S INC	8,149	0.17	113	113	113	113	77
POSCO Humans Co., Ltd. (*1)	-	-	-	-	-	630	-
Innovated Technology Inc. (*1)	-	-	-	-	-	-	-
BioApplications Inc.	450,000	4.44	4,950	1,575	1,575	4,950	1,071
Dowon SF (*1)	-	-	-	-	-	-	-
FOSTEC (*1)	-	-	-	-	-	-	-
Hangang Steel (*1)	-	-	-	-	-	-	-
CJ PHILIPPINES, INC.	109,200	10.00	349	349	349	349	237
DONGJIN VIETNAM Co., Ltd	20,000	10.00	803	803	803	803	546
POSCO ASSAN TST STEEL INDUSTRY (*2)	24,096,526	10.00	15,460	-	-	11,951	-
TES MI s.r.o.	750	3.00	523	523	523	523	356
Kiho Co., Ltd.	200	10.00	377	377	377	377	256
K. K. KOREA KAMCHATKA CO., LTD.	328	10.00	-	-	-	-	-
KNOC INAM LTD.	10	10.00	-	-	-	-	-
POSCO VIETNAM PC	1,924,551	2.70	735	735	735	735	500
Erae AMS Co., Ltd.	1,984,938	12.67	20,163	14,006	14,006	14,006	9,528
HARDT (*3)	10,865	6.59	9,533	9,533	9,533	-	6,485
Sebang Steel Co., Ltd. (*5)	10	10.00	47	47	47	-	32
POSCO-AAPC (*2)	-	13.10	4,712	5,177	5,177	5,363	3,522
			\ 60,717	\ 35,212	\ 35,212	\ 41,779	\$ 23,953
Financial assets at FVPL (other securities)							
Convertible bonds of HARDT (*3)	-	-	-	-	-	4,832	-
Hansung Steel Co., Ltd.	2,500	2.89	12	12	12	12	8
Wind Power Cooperative (*1)	-	-	-	-	-	5	-
			\ 12	\ 12	\ 12	\ 4,849	\$ 8
Financial assets at FVPL (investments)							
POSCO Agricultural Products Export Fund (*4)	-	-	\ -	\ -	\ -	\ 300	\$ -
Korea Die & Mold Industry Cooperative	5	-	1	1	1	1	1
Korea Finance for Construction	180	-	166	166	166	1,211	113
PT POSCO INTERNATIONAL E&P INDONESIA (*1)	-	-	-	-	-	1	-
Posco Community Credit Cooperative	10,800	8.24	270	270	270	270	184
			\ 437	\ 437	\ 437	\ 1,783	\$ 298
			\ 72,162	\ 42,943	\ 42,943	\ 60,519	\$ 29,212

(*1) The financial instruments were disposed of or written off for the year ended December 31, 2024.

(*2) The Group recognized the decrease in fair value of the financial instruments as other comprehensive income for the year ended December 31, 2024.

6.2.1 Financial instruments at fair value (cont'd)

(*3) The financial instrument was converted to preferred stock for the year ended December 31, 2024.

(*4) For the year ended December 31, 2024, it was liquidated.

(*5) The Group newly invested in the financial instruments for the year ended December 31, 2024.

Among the above financial assets at FVOCI, shares in Maruichi Steel Tube Ltd. and Kumho Petro Chemical Co., Ltd. which are listed stocks were valued at their closing prices as of December 31, 2024. As a result, \ 407 million (\$277 thousand), which was calculated by deducting the deferred tax effect of \ 405 million (\$276 thousand) and deducting the effect of the average tax rate change of \ 2 million (\$1 thousand) from the valuation loss of \ 1,654 million (\$1,125 thousand), was reflected in accumulated other comprehensive income.

6.3 Restricted deposits

As of December 31, 2024 and 2023, the Group has deposits of \ 35,125 million (\$23,895 thousand) and \ 41,644 million (\$28,329 thousand), respectively, in financial institutions that were restricted in use due to financial arrangements, collateral provisions and others.

7. Other assets

Details of other assets as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Other current assets			
Advanced payments	\ 55,697	\ 70,977	\$ 37,889
Allowance for doubtful accounts	(14)	(13)	(10)
Prepaid expenses	176,169	124,925	119,843
Allowance for doubtful accounts	(2,123)	(2,371)	(1,444)
Emission rights	-	5,923	-
Biological assets (*)	14,800	10,991	10,068
Others	15,710	15,883	10,687
	\ 260,239	\ 226,315	\$ 177,033
Other current assets			
Long-term advanced payments	\ 23,632	\ 24,239	\$ 16,076
Allowance for doubtful accounts	(1,703)	(1,703)	(1,159)
Long-term prepaid expenses	1,475	14,503	1,003
Others	18,037	87	12,270
	\ 41,441	\ 37,126	\$ 28,190
	\ 301,680	\ 263,441	\$ 205,223

(*) Consumable biological assets are measured at fair value less costs to sell, and changes in fair value are recognized in profit or loss. Cash flows over the life cycle of biological assets are determined by taking into account the estimated production, market prices and estimated cultivation costs of agricultural crops.

8. Inventories

Details of inventories as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Merchandise	\ 963,953	\ 902,752	\$ 655,750
Valuation allowance	(5,496)	(4,470)	(3,739)
Finished goods	87,262	79,179	59,362
Valuation allowance	(6,159)	(6,668)	(4,190)
Semi-finished goods and work-in-process	102,924	107,447	70,016
Valuation allowance	(13,295)	(9,657)	(9,044)
Raw materials	393,878	358,854	267,944
Valuation allowance	(50,059)	(40,681)	(34,054)
Materials-in-transit	573,760	530,979	390,313
Others	34,379	41,270	23,387
Valuation allowance	(473)	(208)	(322)
	<u>\ 2,080,674</u>	<u>\ 1,958,797</u>	<u>\$ 1,415,423</u>

The Group recognized loss on valuation of inventories in cost of sales of \ 15,122 million (\$10,287 thousand) and \ 3,009 million (\$2,047 thousand) for each of the two years in the period ended December 31, 2024, respectively. In addition, the Group recognized reversal of loss on valuation of inventories in cost of sales of \ 1,322 million (\$899 thousand) and \ 17,390 million (\$11,830 thousand) for each of the two years in the period ended December 31, 2024, respectively.

9. Investments in associates and joint venture

9.1 Details of investments in associates and joint venture as of December 31, 2024 and 2023 are as follows:

				Korean won in millions				U.S. dollar in thousand
				Dec. 31, 2024			Dec. 31, 2023	Dec. 31, 2024
	Nationality	Number of shares	Equity ownership (%)	Acquisition cost	Net asset value	Book value	Book value	Book value
<Associates>								
Shanghai Lansheng Daewoo Corp	China	-	49.0	\ 5,312	\ 1,295	\ -	\ -	\$ -
Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	China	-	49.0	161	1,902	1,800	1,608	1,224
KOREA LNG LTD.	Bermuda	2,400	20.0	-	25,622	25,622	58,759	17,430
GENERAL MEDICINES CO., LTD.	Sudan	9,702	33.0	736	3,125	3,330	5,592	2,265
POSCO IJPC	Indonesia	11,693,706	21.7	13,475	16,174	15,704	13,608	10,683
DMSA/AMSA (*1) (*4) (*5)	Madagascar	-	3.9	346,880	(4,023)	-	16,572	-
POSCO MEXICO PROCESSING CENTER HOLDING, LLC (*1)	Mexico	-	19.6	14,004	24,399	22,744	20,225	15,472
POSCO-ESDC LTD.	Slovenia	-	20.0	757	2,413	2,337	2,198	1,590
GLOBAL KOMSCO DAEWOO LLC	Uzbekistan	-	35.0	4,445	8,881	8,867	7,360	6,032
SOUTH-EAST ASIA GAS PIPELINE COMPANY LTD	Hongkong	50,082	25.0	132,907	279,352	279,344	287,280	190,030
Blue Ocean Recovery PEF No.1 YULCHON MEXICO S.A. DE C.V.	Korea	333 units	27.5	33,300	34,159	-	-	-
HyunSon Engineering & Construction (*1)	Mexico	18,267,000	6.2	1,349	1,494	1,862	1,765	1,267
Inco tech Inc. (*1)	Algerie	279,000,000	4.9	281	583	573	264	390
HUNCHUN POSCO HMM INTERNATIONAL LOGISTICS CO., LTD. (*1) (*2)	Korea	350,000	10.0	350	(1,694)	-	-	-
POSCO-MALAYSIA SDN.BHD. (*1)	China	-	10.0	11,488	10,014	9,628	8,779	6,550
POSCO-ITPC S.p.A (*1)	Malaysia	24,128,000	13.6	7,905	259	6,084	5,992	4,139
SHINPOONG DAEWOO PHARMA CO., LTD. (*1)	Italy	-	10.0	781	1,734	1,680	2,476	1,143
Gyeonggi Green Energy Co., Ltd. (*1) (*5)	Vietnam	-	3.4	343	836	852	722	580
Noeul Green Energy Co., Ltd. (*1) (*5)	Korea	2,880,000	19.0	14,400	(11,529)	-	-	-
Samcheok Blue Power Co., Ltd.	Korea	120,000	10.0	600	(1,322)	-	-	-
AES Mong Duong Power CO., LTD. (*3)	Korea	3,844,324	29.0	391,047	219,495	339,954	301,330	231,261
Mong Duong Finance Holdings B.V (*3)	Vietnam	-	30.0	181,226	250,796	-	230,699	-
	Netherlands	30	30.0	861	1,338	-	2,271	-
				\ 1,162,608	\ 865,303	\ 720,381	\ 967,500	\$ 490,056
<Joint venture>								
ECO ENERGY SOLUTION CO., LTD.	Korea	600,000	50.0	\ 3,000	\ 5,466	\ 5,466	\ 3,102	\$ 3,718
				\ 1,165,608	\ 870,769	\ 725,847	\ 970,602	\$ 493,774

(*1) These securities are classified as investments in associates even though the Group's equity ownership is below 20%, as the Group is able to exercise significant influence over the investee.

(*2) For the year ended December 31, 2023, HUNCHUN POSCO HYUNDAI INTERNATIONAL LOGISTICS changed its name to HUNCHUN POSCO HMM INTERNATIONAL LOGISTICS CO., LTD.

(*3) For the year ended December 31, 2024, the application of the equity method to the investments in AES MONG DUONG Power Co., LTD. and MONG DUONG FINANCE HOLDINGS B.V. has been discontinued after replacing the investment to assets held for sale.

(*4) For the year ended December 31, 2024, the application of the equity method to the investment in DMSA/AMSA has been discontinued due to capital impairment.

(*5) As of December 31, 2024, the Group provides its investment in associates marked above amounting to \ 391,647 million (\$266,427 thousand) of as collateral in relation to the borrowings of the associates.

9.2 Changes in the carrying amounts of investments in associates for each of the two years in the period ended December 31, 2024 are as follows (Korean won in millions) :

	2024								
	Beginning balance	Business combination	Disposal	Transfer	Share of profit (loss) of associates	Impairment	Dividends	Others	Ending balance
Shanghai Liansheng Daewoo Corp. (*1)	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -
Shanghai Waigaoqiao Free Trade Zone Liansheng Daewoo Int'l Trading Co., Ltd.	1,808	-	-	-	-	-	-	192	1,800
KOREA LNG LTD.	58,759	-	-	-	17,714	-	(17,829)	(33,022)	25,622
GENERAL MEDICINES CO., LTD.	5,592	-	-	-	(2,803)	-	-	541	3,330
POSCO LIPC	13,808	-	-	-	120	-	-	1,976	15,704
DMSA/MSA (*1)	16,572	-	-	-	(17,395)	-	-	823	-
POSCO MEXICO PROCESSING CENTER HOLDING, LLC	20,225	-	-	-	(489)	-	-	3,008	22,744
POSCO-ESDC LTD.	2,198	-	-	-	66	-	(89)	162	2,337
GLOBAL KOMSCO DAEWOO LLC	7,360	-	-	-	442	-	-	1,065	8,867
SOUTH-EAST ASIA GAS PIPELINE COMPANY LTD	287,280	-	(28,667)	-	45,922	-	(64,208)	39,017	279,344
Blue Ocean Recovery PEF No. 1 (*1)	-	-	-	-	-	-	-	-	-
YULCHON MEXICO S.A. DE C.V.	1,765	-	-	-	194	-	-	(97)	1,862
HyunSan Engineering & Construction	264	-	-	-	256	-	-	53	573
Inco tech Inc. (*1)	-	-	-	-	-	-	-	-	-
HUNCHUN POSCO HMM INTERNATIONAL LOGISTICS CO., LTD	8,779	-	-	-	(176)	-	-	1,025	9,628
POSCO-MALAYSIA SDN.BHD.	5,992	-	-	-	56	-	-	36	6,084
POSCO-ITPC S.p.A	2,476	-	-	-	(941)	-	-	145	1,680
SHINPOONG DAEWOO PHARMA CO.,LTD.	722	-	-	-	66	-	-	64	852
Gyeonggi Green Energy Co., Ltd. (*1)	-	-	-	-	-	-	-	-	-
Noeul Green Energy Co., Ltd. (*1)	-	-	-	-	-	-	-	-	-
Samcheok Blue Power Co., Ltd.	301,330	-	-	-	48,739	-	(10,047)	(68)	339,954
AES Mong Duong Power CO., LTD. (*1) (*2)	230,699	-	-	(134,277)	33,942	(116,017)	(34,822)	20,475	-
Mong Duong Finance Holdings B.V. (*1) (*2)	2,271	-	-	(861)	(327)	(1,200)	-	117	-
ECO ENERGY SOLUTION CO., LTD.	3,102	-	-	-	2,364	-	-	-	5,466
	₩ 970,602	₩ -	₩ (28,667)	₩ (135,138)	₩ 127,750	₩ (117,217)	₩ (126,995)	₩ 35,512	₩ 725,847
U.S. dollar in thousand	\$ 660,273	\$ -	\$ (19,501)	\$ (91,931)	\$ 86,905	\$ (79,739)	\$ (86,391)	\$ 24,158	\$ 493,773

(*1) As of December 31, 2024, the cumulative losses unrecognized as the application of the equity method has been discontinued amount to \ 25,006 million (\$17,011 thousand).

(*2) For the year ended December 31, 2024, investments in AES MONG DUONG Power Co., LTD and MONG DUONG FINANCE HOLDINGS B.V. were classified as assets held for sale, and an impairment loss of \ 117,217 million (\$79,739 thousand) was recognized as the fair value less costs to sell was measured at \ 135,138 million (\$91,931 thousand).

9.2 Changes in the carrying amounts of investments in associates for each of the two years in the period ended December 31, 2024 are as follows: (Korean won in millions) (cont'd)

	2023								
	Beginning balance	Business combination	Disposal	Transfer	Share of profit (loss) of associates	Impairment	Dividends	Others	Ending balance
Shanghai Liansheng Daewoo Corp	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -
Shanghai Waigaoqiao Free Trade Zone Liansheng Daewoo Int'l Trading Co., Ltd.	1,614	-	-	-	-	-	-	(6)	1,608
KOREA LNG LTD.	29,124	-	-	-	21,060	-	(21,106)	29,661	58,759
GENERAL MEDICINES CO., LTD.	5,814	-	-	-	377	-	(428)	(171)	5,592
POSCO IJPC	13,390	-	-	-	-	-	-	218	13,608
DMSA/AMSA	23,740	-	-	-	(7,681)	-	-	513	16,572
POSCO MEXICO PROCESSING CENTER HOLDING, LLC	19,965	-	-	-	(108)	-	-	348	20,225
POSCO-ESDC LTD.	1,943	-	-	-	225	-	(64)	114	2,198
GLOBAL KOMSCO DAEWOO LLC	7,427	-	-	-	(200)	-	-	133	7,360
SOUTH-EAST ASIA GAS PIPELINE COMPANY LTD	290,318	-	-	-	50,339	-	(59,295)	5,918	287,280
Blue Ocean Recovery PEF No. 1	-	-	-	-	-	-	-	-	-
SPH Co., Ltd.	500	-	(500)	-	-	-	-	-	-
YULCHON MEXICO S.A. DE C.V.	1,500	-	-	-	75	-	-	190	1,765
HyunSon Engineering & Construction	24	-	-	-	239	-	-	1	264
QURO CO., LTD.	687	-	(682)	-	33	-	-	162	-
Inco tech Inc.	-	-	-	-	-	-	-	-	-
HUNCHUN POSCO HMM INTERNATIONAL LOGISTICS CO., LTD	8,943	-	-	-	(135)	-	-	(29)	8,779
POSCO-MALAYSIA SDN.BHD.	5,445	-	-	-	552	-	-	(5)	5,992
POSCO-ITPC S.p.A	2,873	-	-	-	(552)	-	-	155	2,476
SHINPOONG DAEWOO PHARMA CO.,LTD.	677	-	-	-	53	-	-	(8)	722
Erae AMS Co., Ltd.	20,163	-	-	(19,379)	(784)	-	-	-	-
Gyeonggi Green Energy Co., Ltd.	-	-	-	-	-	-	-	-	-
Noeul Green Energy Co., Ltd.	-	-	-	-	-	-	-	-	-
Samcheok Blue Power Co., Ltd.	-	321,963	-	-	(10,542)	-	(10,020)	(71)	301,330
AES Mang Duang Power CO., LTD.	-	218,385	-	-	38,696	-	(33,839)	7,457	230,699
Mang Duang Finance Holdings B.V	-	4,768	-	-	(480)	-	(2,031)	(6)	2,271
ECO ENERGY SOLUTION CO., LTD.	-	2,982	-	-	120	-	-	-	3,102
	₩ 434,157	₩ 548,098	₩ (1,382)	₩ (19,379)	₩ 91,307	₩ -	₩ (126,803)	₩ 44,594	₩ 970,602
U.S. dollar in thousand	\$ 295,352	\$ 372,856	\$ (940)	\$ (13,183)	\$ 62,114	\$ -	\$ (86,261)	\$ 30,336	\$ 660,273

9.3 Details of unrealized gains and losses reflected in gain or loss on investments in associates for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
GENERAL MEDICINES CO., LTD.	\ 45	\ (23)	\$ 31
GLOBAL KOMSCO DAEWOO LLC.	(14)	(2)	(10)
POSCO IJPC	(99)	(219)	(67)
POSCO-ITPC S.P.A.	(63)	18	(43)
POSCO-MALAYSIA SDN. BHD.	9	(18)	6
POSCO MEXICO PROCESSING CENTER HOLDING LLC.	(1,273)	(53)	(866)
	\ (1,395)	\ (297)	\$ (949)

9.4 The summarized financial information on associates as of and for the year ended December 31, 2024 is as follows: (Korean won in millions)

Subsidiaries	Assets	Liabilities	Sales	Net profit (loss)
Shanghai Lansheng Daewoo Corp	4,743	2,100	-	-
Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	52,204	48,322	-	-
KOREA LNG LTD.	128,215	101	90,578	88,572
GENERAL MEDICINES CO., LTD.	15,855	6,384	-	(8,629)
POSCO IJPC	244,928	170,375	345,729	1,006
DMSA/AMSA	3,364,786	3,468,220	694,120	(571,215)
POSCO MEXICO PROCESSING CENTER HOLDING, LLC	661,110	536,852	1,008,224	3,709
POSCO-ESDC LTD.	16,737	4,673	37,072	328
GLOBAL KOMSCO DAEWOO LLC	53,596	28,223	32,023	1,302
SOUTH-EAST ASIA GAS PIPELINE COMPANY LTD	1,634,345	518,742	409,790	183,392
Blue Ocean Recovery PEF No. 1	323,584	199,462	-	-
YULCHON MEXICO S.A. DE C.V.	42,874	18,926	43,242	3,111
HyunSon Engineering & Construction	368,683	356,774	191,359	5,237
Inco tech Inc.	61,463	78,402	2,398	(7,011)
HUNCHUN POSCO HMM INTERNATIONAL LOGISTICS CO., LTD.	106,942	6,807	691	(1,760)
POSCO-MALAYSIA SDN.BHD.	61,951	60,051	143,209	349
POSCO-ITPC S.P.A.	119,864	102,520	118,530	(8,778)
SHINPOONG DAEWOO PHARMA CO., LTD.	25,876	1,438	216,016	1,916
Gyeonggi Green Energy Co., Ltd.	165,551	226,241	60,769	(26,040)
Noeul Green Energy Co., Ltd.	95,569	108,793	47,609	4,397
Samcheok Blue Power Co., Ltd.	4,770,385	4,013,505	596,497	177,922
AES Mong Duong Power CO., LTD.	1,758,256	922,268	460,672	118,071
Mong Duong Finance Holdings B.V.	765,075	760,616	-	(1,312)
ECO ENERGY SOLUTION CO., LTD.	18,773	7,840	49,703	4,728

10. Property, plant and equipment

10.1 Details of property, plant and equipment as of December 31, 2024 and 2023 are as follows:

December 31, 2024					
	Korean won in millions				U.S. dollar in thousands
	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Less: government subsidies	Book value
Land	\ 576,266	\ -	\ (3,819)	\ -	\ 572,447
Buildings	1,070,030	(312,368)	(130,794)	(248)	626,620
Structures	1,040,418	(433,556)	(4,359)	-	602,503
Machinery	2,944,936	(1,529,850)	(103,835)	-	1,311,251
Vehicles	34,696	(21,913)	(164)	(14)	12,605
Tools	95,062	(68,835)	(1,881)	-	24,346
Fixtures	135,196	(104,602)	(4,202)	-	26,392
Construction-in-progress	952,257	-	(27,272)	-	924,985
Bearer plants	203,433	(63,982)	-	-	139,451
	<u>\ 7,052,294</u>	<u>\ (2,535,106)</u>	<u>\ (276,326)</u>	<u>\ (262)</u>	<u>\ 4,240,600</u>
U.S. dollar in thousands	<u>\$ 4,797,479</u>	<u>\$ (1,724,562)</u>	<u>\$ (187,977)</u>	<u>\$ (178)</u>	<u>\$ 2,884,762</u>

December 31, 2023					
	Korean won in millions				U.S. dollar in thousands
	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Less: government subsidies	Book value
Land	\ 554,862	\ -	\ (3,817)	\ -	\ 551,045
Buildings	1,004,768	(284,455)	(73,630)	(210)	646,473
Structures	885,918	(409,444)	(3,920)	-	472,554
Machinery	2,913,077	(1,441,074)	(79,146)	-	1,392,857
Vehicles	32,436	(20,059)	(131)	(24)	12,222
Tools	87,818	(60,428)	(305)	-	27,085
Fixtures	127,723	(95,530)	(3,106)	(1)	29,086
Construction-in-progress	462,595	-	(26,269)	(36)	436,290
Bearer plants	186,723	(49,392)	-	-	137,331
	<u>\ 6,255,920</u>	<u>\ (2,360,382)</u>	<u>\ (190,324)</u>	<u>\ (271)</u>	<u>\ 3,704,943</u>
U.S. dollar in thousands	<u>\$ 4,255,728</u>	<u>\$ (1,605,702)</u>	<u>\$ (129,472)</u>	<u>\$ (184)</u>	<u>\$ 2,520,369</u>

10.2 Changes in the carrying amount of property, plant and equipment for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions					
	Beginning balance	Acquisition	Disposal, etc.	Depreciation	Impairment (*1)	Ending balance
Land	₩ 551,045	₩ 20,286	₩ (4,354)	₩ -	₩ -	₩ 572,447
Buildings	646,883	4,085	(7,402)	(27,172)	(47,048)	626,888
Less: government subsidies	(210)	-	-	15	-	(248)
Structures	472,554	1,576	(495)	(32,450)	(435)	602,503
Machinery	1,392,857	64,402	(16,100)	(128,559)	(23,661)	1,311,251
Vehicles	12,246	2,020	(522)	(2,779)	(22)	12,619
Less: government subsidies	(24)	-	-	10	-	(14)
Tools	27,085	16,028	(454)	(14,895)	(1,519)	24,346
Fixtures	29,087	7,592	(988)	(11,698)	(737)	26,392
Less: government subsidies	(1)	-	-	-	-	1
Construction-in-progress	436,290	662,527	(271)	-	-	924,985
Bearer plants	137,331	-	(27)	(9,602)	-	139,451
	<u>₩ 3,704,943</u>	<u>₩ 778,496</u>	<u>₩ (30,613)</u>	<u>₩ (227,130)</u>	<u>₩ (73,420)</u>	<u>₩ 4,240,600</u>
U.S. dollar in thousands	<u>\$ 2,520,369</u>	<u>\$ 529,589</u>	<u>\$ (20,825)</u>	<u>\$ (154,510)</u>	<u>\$ (49,946)</u>	<u>\$ 2,884,762</u>

(*1) For the year ended December 31, 2024, impairment losses were recognized for the carrying amounts exceeding the recoverable amounts as a result of impairment tests on items of property, plant and equipment held by the Group's subsidiaries such as SUZHOU POSCO-CORE TECHNOLOGY CO.LTD., POSCO INTERNATIONAL AMARA CO. LTD., and POSCO INTERNATIONAL TEXTILE LLC.

(*2) Including transfers of construction-in-progress to property, plant and equipment and intangible assets.

10.2 Changes in the carrying amount of property, plant and equipment for each of the two years in the period ended December 31, 2024 are as follows: (cont'd)

2023								
Korean won in millions								
	Beginning balance	Increase (Decrease) due to merger	Acquisition	Disposal, etc.	Depreciation	Impairment	Others (*3)	Ending balance
Land (*1)	₩ 181,888	₩ 358,847	₩ 38,443	₩ -	₩ -	₩ (3,785)	₩ (1,948)	₩ 551,045
Buildings (*1)	510,849	90,183	23,249	(3,798)	(27,349)	(1,520)	55,287	846,883
Less: government subsidies	-	(224)	-	-	14	-	-	(210)
Structures	71,798	411,798	1,221	(580)	(29,270)	-	17,587	472,554
Machinery (*1)	447,729	972,741	48,735	(9,215)	(127,582)	(3,088)	83,535	1,392,857
Vehicles	8,714	209	4,897	(53)	(2,574)	-	1,253	12,246
Less: government subsidies	-	(18)	(14)	-	8	-	-	(24)
Tools	28,403	419	9,084	(344)	(14,115)	-	5,858	27,085
Fixtures	28,259	3,243	8,388	(517)	(10,285)	-	21	29,087
Less: government subsidies	(13)	-	-	-	12	-	-	(1)
Construction-in-progress (*2)	183,827	77,894	330,757	-	-	(251)	(135,937)	438,290
Bearer plants	141,720	-	-	-	(9,579)	-	5,190	137,331
	₩ 1,560,752	₩ 1,914,872	₩ 462,518	₩ (14,505)	₩ (220,720)	₩ (8,622)	₩ 10,648	₩ 3,704,943
U.S. dollar in thousands	\$ 1,061,736	\$ 1,302,634	\$ 314,638	\$ (9,867)	\$ (150,150)	\$ (5,865)	\$ 7,244	\$ 2,520,369

(*1) For the year ended December 31, 2023, impairment loss of \ 8,371 million (\$5,695 thousand) was recognized as a result of the impairment test on the items of property, plant and equipment held by the Group's subsidiary BRASIL SAO PAULO STEEL PROCESSING CENTER ("BSPC") in Brazil (carrying amount: \ 8,604 million (\$5,853 thousand) in total).

(*2) For the year ended December 31, 2023, impairment loss was recognized for the carrying amount exceeding the recoverable amount as a result of impairment test on the assets held by the Group's subsidiary SENEX HOLDINGS PTY LTD.

(*3) Including transfers of construction-in-progress to property, plant and equipment and intangible assets.

11. Leases

11.1 Group as a lessee

11.1.1 The carrying amounts and changes in right-of-use assets and lease liabilities for each of the two years in the period ended December 31, 2024 are as follows (Korean won in millions) :

2024								
Right-of-use assets						Lease receivables	Lease liabilities	
	Land	Building and structure	Aircraft	Facility	Others	Total		
Beginning balance	₩ 44,888	₩ 34,997	₩ 21,952	₩ 239,595	₩ 51,077	₩ 392,509	₩ 312,447	₩ 421,827
Acquisition	47	15,787	-	7,884	23,889	47,567	2,384	49,698
Termination or cancellation of contracts	(1)	(4,288)	-	-	(431)	(4,700)	(593)	(3,187)
Depreciation	(1,081)	(15,322)	(5,098)	(18,055)	(8,888)	(48,420)	-	-
Interest income	-	-	-	-	-	-	8,313	-
Related profit	-	-	-	-	-	-	(1,336)	-
Interest expense	-	-	-	-	-	-	-	22,273
Foreign exchange	-	-	-	-	-	-	10,014	25,998
Impairment loss (*1)	(1,994)	-	-	-	-	(1,994)	-	-
Lease payment	-	-	-	-	-	-	-	(98,901)
Lease receipt	-	-	-	-	-	-	(32,044)	-
Others	6,785	1,810	-	13,033	(23,785)	(2,157)	31,288	(5,924)
Ending balance	₩ 48,664	₩ 32,984	₩ 16,856	₩ 242,457	₩ 41,844	₩ 382,805	₩ 328,453	₩ 413,800
U.S. dollar in thousands	\$ 33,105	\$ 22,438	\$ 11,467	\$ 164,937	\$ 28,465	\$ 260,412	\$ 223,437	\$ 281,497

(*1) For the year ended December 31, 2024, impairment loss was recognized for the carrying amount exceeding the recoverable amount as a result of impairment test on the leased assets held by the Group's subsidiary POSCO INTERNATIONAL AMARA CO. LTD.

11.1.1 The carrying amounts and changes in right-of-use assets and lease liabilities for each of the two years in the period ended December 31, 2024 are as follows: (Korean won in millions) (cont'd)

	2023							
	Right-of-use assets						Lease receivables	Lease liabilities
	Land	Building and structure	Aircraft	Facility	Others	Total		
Beginning balance	₩ 51,187	₩ 37,964	₩ 584	₩ 166,246	₩ 3,377	₩ 259,358	₩ 91,717	₩ 307,710
Acquisition	34	13,757	25,137	41,709	63,720	144,357	51,606	193,223
Termination or cancellation of contracts	(1,819)	(481)	-	(2)	(48)	(2,350)	-	(630)
Depreciation	(1,130)	(16,552)	(3,769)	(16,438)	(16,517)	(54,404)	-	-
Interest income	-	-	-	-	-	-	5,968	-
Related profit	-	-	-	-	-	-	25,329	-
Interest expense	-	-	-	-	-	-	-	20,439
Foreign exchange	-	-	-	-	-	-	1,530	4,911
Lease payment	-	-	-	-	-	-	-	(111,949)
Lease receipt	-	-	-	-	-	-	(63,437)	-
Increase due to business combination	-	-	-	31,919	175	32,094	221,121	4,202
Others	(3,384)	309	-	16,159	370	13,454	(21,387)	3,921
Ending balance	₩ 44,888	₩ 34,997	₩ 21,952	₩ 239,595	₩ 51,077	₩ 392,509	₩ 312,447	₩ 421,827
U.S. dollar in thousands	\$ 30,536	\$ 23,807	\$ 14,933	\$ 162,990	\$ 34,746	\$ 267,013	\$ 212,549	\$ 286,957

11.1.2 The amounts recognized in profit or loss for each of the two years in the period ended December 31, 2024 in relation to leases are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
<Revenues>			
Interest income and other gains on lease receivables	\ 4,977	\ 31,297	\$ 3,386
<Expenses>			
Depreciation of right-of-use assets	\ (48,420)	\ (54,404)	\$ (32,939)
Interest on lease liabilities	(22,273)	(20,439)	(15,152)
Short-term lease payments	(2,760)	(4,572)	(1,878)
Lease payments of leases of low-value assets	(2,362)	(1,980)	(1,607)
	\ (75,815)	\ (81,395)	\$ (51,576)
Net profit or loss	\ (70,838)	\ (50,098)	\$ (48,190)

11.2 Group as a lesser

11.2.1. Details of finance lease receivables as of December 31, 2024 and 2023 are as follows: (Korean won in millions)

	December 31, 2024		December 31, 2023	
	Current	Non-current	Current	Non-current
Finance lease receivables	\ 25,292	\ 303,161	\ 29,438	\ 283,009
U.S. dollar in thousands	\$ 17,205	\$ 206,232	\$ 20,026	\$ 192,523

11.2.2 Details of the maturity profile on finance lease receivables for each of the two years in the period ended December 31, 2024 are as follows. The maturity amount is an undiscounted contractual cash flow that includes interest received.

	2024	
	Korean won in millions	U.S. dollar in thousands
Within 1 year	\ 25,846	\$ 17,582
More than 1 year but less than 5 years	79,324	53,962
More than 5 years	253,658	172,556
	\ 358,828	\$ 244,100

	2023	
	Korean won in millions	U.S. dollar in thousands
Within 1 year	\ 30,108	\$ 20,482
More than 1 year but less than 5 years	81,111	55,178
More than 5 years	234,822	159,743
	\ 346,041	\$ 235,403

11.2.3 The Group recognized rental income of \ 12,355 million (\$8,405 thousand) and \ 12,146 million (\$8,263 thousand) in relation to operating lease arrangements for each of the two years in the period ended December 31, 2024, respectively.

12. Intangible assets

12.1 Changes in the net book value of intangible assets for each of the two years in the period ended December 31, 2024 are as follows:

	2024							U. S. dollar in thousands	
	Korean won in million								
	Beginning balance	Acquisition	Disposal, etc.	Amortization	Impairment	Others (*2)	Ending balance	Ending balance	
Goodwill (*1)	₩ 43,705	₩ -	₩ -	₩ -	₩ (9,722)	₩ 675	₩ 34,658	\$ 23,577	
Exploration and evaluation assets	104,360	16,714	(764)	-	-	(27,498)	92,812	63,137	
Less: government subsidies	(33,716)	-	-	-	-	31,519	(2,197)	(1,494)	
Development block intangible assets	10,234	543	-	-	-	(10,777)	-	-	
Industrial property rights	16,549	540	-	(430)	-	(1,949)	14,710	10,007	
Mining rights (*3)	2,125,721	366,663	-	(217,543)	-	54,751	2,329,592	1,584,756	
Membership	20,005	687	(180)	(35)	-	(411)	20,066	13,650	
Construction-in-progress	-	5,396	-	-	-	(5,396)	-	-	
Software	42,194	3,097	-	(6,407)	-	15,028	53,912	36,675	
Others	2,865	880	(821)	(7,788)	-	14,352	9,488	6,455	
	₩ 2,351,917	₩ 364,620	₩ (1,766)	₩ (232,203)	₩ (9,722)	₩ 70,284	₩ 2,553,041	\$ 1,738,783	
U. S. dollar in thousand	\$ 1,688,338	\$ 288,381	\$ (1,201)	\$ (167,881)	\$ (8,813)	\$ 47,819	\$ 1,738,783		

(*1) As a result of the impairment test on assets held by the Group's subsidiary Shinan Green Energy Co., Ltd., \ 9,722 million (\$6,614 thousand) of impairment loss was recognized. Details thereof are disclosed in Note 12-2.

(*2) Including transfers from construction-in-progress and decrease due to the approval of exemption from the repayment obligation of contingent loans.

(*3) Including the mining rights related to Myanmar A-1/A-3 blocks.

12.1 Changes in the net book value of intangible assets for each of the two years in the period ended December 31, 2024 are as follows (cont'd):

	2023								U. S. dollar in thousands
	Korean won in million								
	Beginning balance	Increase (Decrease) due to merger	Acquisition	Disposal, etc.	Amortization	Impairment	Others (*3)	Ending balance	Ending balance
Goodwill (*1)	₩ 7,270	₩ 44,275	₩ -	₩ -	₩ -	₩ (8,083)	₩ 243	₩ 43,705	\$ 29,731
Exploration and evaluation assets (*2)	99,628	-	17,341	-	-	(1,204)	(11,405)	104,360	70,993
Less: government subsidies	(41,646)	-	-	-	-	-	7,930	(33,716)	(22,936)
Development block intangible assets	78,970	-	27,831	-	-	-	(96,567)	10,234	6,962
Industrial property rights	1,485	-	560	-	(4,982)	-	19,486	16,549	11,258
Mining rights (*4)	2,058,699	-	191,166	-	(247,741)	-	123,597	2,125,721	1,446,069
Membership	15,200	3,290	3,283	(1,680)	(85)	-	(3)	20,005	13,609
Construction-in-progress	4,280	(1,340)	4,596	-	-	-	(7,536)	-	-
Software	12,367	2,604	2,959	-	(7,084)	-	31,348	42,194	28,703
Others	-	15,807	-	-	-	-	(12,942)	2,865	1,949
	₩ 2,238,263	₩ 84,838	₩ 247,738	₩ (1,880)	₩ (269,892)	₩ (8,287)	₩ 54,161	₩ 2,331,917	\$ 1,688,338
U. S. dollar in thousand	\$ 1,621,281	\$ 43,970	\$ 188,628	\$ (1,143)	\$ (178,797)	\$ (8,318)	\$ 38,837	\$ 1,688,338	

(*1) As a result of the impairment test on assets held by the Group's subsidiary Shinan Green Energy Co., Ltd., ₩ 8,083 million (\$5,499 thousand) of impairment loss was recognized.

(*2) For the year ended December 31, 2023, impairment loss was recognized for the carrying amount exceeding the recoverable amount as a result of impairment test on the leased assets held by the Group's subsidiary SENEX HOLDINGS PTY LTD.

(*3) Including transfers from construction-in-progress and decrease due to the approval of exemption from the repayment obligation of contingent loans.

(*4) Including the mining rights related to Myanmar A-1/A-3 blocks.

12.2 The book values of goodwill allocated to Group's CGU as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
POSCO ENERGY Co., Ltd. (*1)	₩ 26,471	₩ 26,471	\$ 18,007
PT. BIO INTI AGRINDO	8,187	7,512	5,569
Shinan Green Energy Co., Ltd. (*2)	-	9,722	-
	₩ 34,658	₩ 43,705	\$ 23,576

(*1) Presenting the amount of goodwill of POSCO Energy Co., Ltd. (the merged entity) that had been recognized by POSCO Holdings Inc., the ultimate controlling company, as the Group's business combination under common control with POSCO Energy Co., Ltd.

(*2) As management performed an impairment assessment on the goodwill of Shinan Green Energy Co., Ltd. amounting to ₩ 9,722 million (\$6,614 thousand), the recoverable amount of the cash-generating unit including the goodwill was measured based on the present value (value-in-use) of future cash flows expected to arise from the cash-generating unit during the business operation period until March 31, 2041. The discount rate used is 8.85%, and the average capital structure of comparable entities during the evaluation period (i.e., operation period) was applied. As a result, the recoverable amount of the cash-generating unit was estimated to be lower than its carrying amount and an impairment loss of ₩ 9,722 million (\$6,614 thousand) was recognized.

12.3 Joint arrangement

The mining rights of intangible assets and the machinery of property, plant and equipment include the Group's share of the jointly held assets held under joint arrangements. The major joint arrangements of the Group as of December 31, 2024 are as follows:

	Activities	Equity interest (%)	Location
Myanmar A-1/A-3 blocks	Development and production for gas area	51	Myanmar
Offshore midstream	Gas transmission facilities	51	Myanmar

13. Investment properties

13.1 Details of investment properties as of December 31, 2024 and 2023 are as follows:

December 31, 2024				
	Korean won in millions			U.S. dollar in thousands
	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Land	\ 52,779	\ -	\ -	\ 52,779
Buildings	125,545	(36,482)	(3,930)	85,133
	<u>\ 178,324</u>	<u>\ (36,482)</u>	<u>\ (3,930)</u>	<u>\ 137,912</u>
U.S. dollar in thousands	<u>\$ 121,309</u>	<u>\$ (24,818)</u>	<u>\$ (2,673)</u>	<u>\$ 93,818</u>

December 31, 2023				
	Korean won in millions			U.S. dollar in thousands
	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Land	\ 52,856	\ -	\ -	\ 52,856
Buildings	125,399	(32,924)	(3,708)	88,767
	<u>\ 178,255</u>	<u>\ (32,924)</u>	<u>\ (3,708)</u>	<u>\ 141,623</u>
U.S. dollar in thousands	<u>\$ 121,262</u>	<u>\$ (22,397)</u>	<u>\$ (2,522)</u>	<u>\$ 96,342</u>

13.2 Changes in the book values of investment properties for each of the two years in the period ended December 31, 2024 are as follows: (Korean won in millions)

2024				
	Beginning balance	Depreciation	Replacement	Ending balance
Land	\ 52,856	\ -	\ (77)	\ 52,779
Building	88,767	(3,558)	(76)	85,133
	<u>\ 141,623</u>	<u>\ (3,558)</u>	<u>\ (153)</u>	<u>\ 137,912</u>
U.S. dollar in thousands	<u>\$ 96,342</u>	<u>\$ (2,420)</u>	<u>\$ (104)</u>	<u>\$ 93,818</u>

2023				
	Beginning balance	Depreciation	Replacement	Ending balance
Land	\ 50,368	\ -	\ 2,488	\ 52,856
Building	89,781	(3,024)	2,010	88,767
	<u>\ 140,149</u>	<u>\ (3,024)</u>	<u>\ 4,498</u>	<u>\ 141,623</u>
U.S. dollar in thousands	<u>\$ 95,339</u>	<u>\$ (2,057)</u>	<u>\$ 3,060</u>	<u>\$ 96,342</u>

13.3 The fair value of investment properties

The fair value of investment property amount to \ 177,190 million (\$120,537 thousand) as of December 31, 2024.

13.4 Details of income and expense arising from investment properties for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Rental income	\ 12,754	\ 12,310	\$ 8,676
Operating expense	(6,967)	(6,640)	(4,739)
	<u>\ 5,787</u>	<u>\ 5,670</u>	<u>\$ 3,937</u>

13.5 Joint arrangement

The Group owns POSCO Tower Songdo, a real estate property, located in Yeonsu-gu, Incheon, under a joint arrangement. As of December 31, 2024, the Group owns 60% of the real estate property and has classified the asset as property, plant and equipment and investment properties. Such joint arrangements are accounted for as joint operations, and rental income generated and expenses incurred as a result of the joint operation are recognized as income and expenses in proportion to the Group's shares.

14. Trade and other payables

Details of trade and other payables as of December 31, 2024 and 2023 are as follows:

	December 31, 2024		December 31, 2023	
	Current	Non-current	Current	Non-current
Trade payables	\ 2,097,737	\ -	\ 2,423,121	\ -
Other payables	635,161	741	506,041	1,736
Accrued expenses	91,635	1,944	62,695	2,007
Guarantee deposits received	28,773	5,705	3,199	7,774
Lease liabilities	79,527	334,273	74,361	347,466
Financial guarantee liabilities	-	112	-	192
	<u>\ 2,932,833</u>	<u>\ 342,775</u>	<u>\ 3,069,417</u>	<u>\ 359,175</u>
U.S. dollar in thousands	<u>\$ 1,995,124</u>	<u>\$ 233,180</u>	<u>\$ 2,088,039</u>	<u>\$ 244,337</u>

15. Borrowings and bonds

15.1 Details of borrowings as of December 31, 2024 and 2023 are as follows:

Creditor		Annual interest rates	The longest maturity	Korean won in millions		U.S. dollar in thousands
				Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
<Current borrowings>						
Short-term borrowings:						
Banker's usance	Woori Bank and others	3M TERM SOFR+1.05 % and others	Nov. 1, 2025	\ 6,932	\ 12,521	\$ 4,716
NEGO borrowings	Woori Bank and others	3M TERM SOFR+0.64 % and others	Nov. 1, 2025	503,343	457,817	342,410
General borrowings (Limit)	Woori Bank and others	3M TERM SOFR+0.98 % and others	Nov. 29, 2025	885,157	511,600	602,148
Korean won-denominated borrowings (*1)	Shinhan Bank and others	4.71% and others	Sep. 30, 2025.09.30	194,500	141,900	132,313
Other borrowings	HANA Bank and others	3.00% and others	Apr. 28, 2025	9,661	467,700	6,572
				\ 1,599,593	\ 1,591,538	\$ 1,088,159
Current-portion of long-term borrowings:						
Energy special account financing loan	Korea Energy Agency	3year government bond yield-2.25%	Dec. 31, 2025	1,385	1,843	942
Contingent loans	Korea Energy Agency	3year government bond yield-1.25%	Sep. 30, 2025	9,113	6,717	6,199
General borrowings (Facility) (*1)	Shinhan Bank and others	3M TERM SOFR+0.02 % and others	Dec. 31, 2025	26,265	132,553	17,867
Other borrowings (*1)	Korea EXIM Bank and others	2.12% and others	Nov. 28, 2025	432,463	97,851	294,193
Less: present value discount				(565)	-	(384)
				\ 468,661	\ 238,964	\$ 318,817
				\ 2,068,254	\ 1,830,502	\$ 1,406,976

15.1 Details of borrowings as of December 31, 2024 and 2023 are as follows: (cont'd)

		Annual interest rates	The longest maturity	Korean won in millions		U.S. dollar in thousands
	Creditor			Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
<Non-current borrowings>						
Long-term borrowings denominated in Korean won:						
Energy special account financing loan	Korea Energy Agency	3year government bond yield- 2.25%	Dec. 15, 2027	\ 403	768	\$ 274
Facility borrowings (*1)	Community Credit Cooperative s and others	5.70% and others	Mar. 15, 2040	223,248	178,015	151,869
Other borrowings (*1)	Korea Rural Community Cooperation and others	2.00% and others	Sep. 15, 2035	106,127	129,477	72,195
				\ 329,778	\ 308,260	\$ 224,338
Long-term borrowings denominated in foreign currency:						
Energy special account financing loan	Korea Energy Agency	3year government bond yield- 2.25%	Dec. 15, 2027	1,050	1,815	714
Contingent loans (*2)	Korea Energy Agency	3year government bond yield- 1.25%	Undecided	89,863	64,682	61,131
Facility borrowings	ANZ and others	3M BBSW+2.22 % and others	Sep. 30, 2028	429,560	357,092	292,218
Other borrowings (*1)	Korea EXIM Bank and others	2.12% and others	Oct. 8, 2027	294,923	485,912	200,628
				\ 815,396	\ 909,501	\$ 554,691
				\ 1,145,174	\ 1,217,761	\$ 779,029
Less: present value discount				(4,528)	(2,846)	\$ (3,080)
				\ 1,140,646	\ 1,214,915	\$ 775,949
Total borrowings				\ 3,208,900	\ 3,045,417	\$ 2,182,925

(*1) The Group's property, plant and equipment are provided as collateral for the borrowings as of December 31, 2024 (see Note 20).

(*2) Due to the nature of the exploration project, the maturity date of the contingent loan cannot be specified.

15.2 Details of bonds as of December 31, 2024 and 2023 are as follows:

	Annual interest rates	Maturity	Korean won in millions		U.S. dollar in thousands			
			Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024			
Current Portion of bonds:								
17-1st unsecured bond	3.13%	Jul. 10, 2025	\	70,000	\	-	\$	47,619
21-2nd unsecured bond	2.27%	Mar. 7, 2024	-		130,000	-		
22-2nd unsecured bond	1.73%	Jul. 4, 2024	-		80,000	-		
22-4th unsecured bond	2.52%	Apr. 29, 2024	-		60,000	-		
22-5th unsecured bond	1.92%	Aug. 8, 2024	-		60,000	-		
24-2nd unsecured bond	1.94%	May 28, 2025	50,000		-			34,014
24-6th unsecured bond	1.68%	Aug. 6, 2025	110,000		-			74,830
25-1st unsecured bond	1.51%	Mar. 19, 2024	-		70,000	-		
25-4th unsecured bond	2.50%	Oct. 18, 2024	-		219,500	-		
26th unsecured bond	1.68%	Oct. 11, 2024	-		257,880	-		
27th unsecured bond	Daily SOFR+1.30% p.a.	Mar. 17, 2025	367,500		-			250,000
28th unsecured bond (*1)	3M TERM SOFR+1.50% p.a.	Jul. 26, 2025	147,000		-			100,000
29th unsecured bond (*1)	Daily SORA+1.55% p.a.	Oct. 25, 2025	183,783		-			125,022
30-1st unsecured bond	2.86%	Jan. 27, 2025	160,000		-			108,844
32-1st unsecured bond	4.29%	Aug. 29, 2025	30,000		-			20,408
			\	1,118,283	\	877,380	\$	760,737
				(548)		(671)		(373)
Less: present value discount on bonds			\	1,117,735	\	876,709	\$	760,364
Non-current bonds:								
17-1st unsecured bond	3.13%	Jul. 10, 2025	\	-	\	70,000	\$	-
22-3rd unsecured bond	1.95%	Jul. 4, 2026	50,000		50,000			34,014
22-6th unsecured bond	2.25%	Aug. 8, 2026	50,000		50,000			34,014
24-2nd unsecured bond	1.94%	May 28, 2025	-		50,000			-
24-4th unsecured bond	2.47%	Apr. 28, 2027	50,000		50,000			34,014
24-6th unsecured bond	1.68%	Aug. 6, 2025	-		110,000			-
24-7th unsecured bond	1.86%	Aug. 6, 2027	40,000		40,000			27,211
25-2nd unsecured bond	2.18%	Mar. 19, 2026	80,000		80,000			54,422
25-3rd unsecured bond	2.47%	Mar. 17, 2028	50,000		50,000			34,014
27th unsecured bond	Daily SOFR+1.30% p.a.	Mar. 17, 2025	-		322,350			-
28th unsecured bond	3M TERM SOFR+1.50% p.a.	Jul. 26, 2025	-		128,940			-
29th unsecured bond	Daily SORA+1.55% p.a.	Oct. 25, 2025	-		166,066			-
30-1st unsecured bond	2.86%	Jan. 27, 2025	-		160,000			-
30-2nd unsecured bond	3.02%	Jan. 27, 2027	40,000		40,000			27,211
30-3rd unsecured bond	4.00%	May 2, 2032	100,000		100,000			68,027
31th unsecured bond	4.18%	May 25, 2026	200,000		200,000			136,054
32-1st unsecured bond	4.29%	Aug. 29, 2025	-		30,000			-
32-2nd unsecured bond	4.39%	Aug. 28, 2026	120,000		120,000			81,633

	Annual interest rates	Maturity	Korean won in millions		U.S. dollar in thousands
			Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
32-3rd unsecured bond	4.56%	Aug. 29, 2028	50,000	50,000	34,014
33-1st unsecured bond	3.28%	Sep. 11, 2026	80,000	-	54,422
33-2nd unsecured bond	3.25%	Sep. 10, 2027	190,000	-	129,252
33-3rd unsecured bond	3.34%	Sep. 12, 2029	30,000	-	20,408
34th unsecured bond	3M TERM SOFR+1% p.a.	Oct. 8, 2027	441,000	-	300,000
			\ 1,571,000	\ 1,867,356	\$ 1,068,710
			(3,903)	(3,242)	(2,655)
			\ 1,567,097	\ 1,864,114	\$ 1,066,055
			\ 2,684,832	\ 2,740,823	\$ 1,826,419
Less: present value discount on bonds					

(*1) The Group enters into currency swap contracts to avoid the risk of exchange rate fluctuations and interest rate fluctuations.

16. Other liabilities

Details of other liabilities as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Current:			
Advances received	\ 109,900	\ 107,705	\$ 74,762
Unearned revenue	74,571	45,212	50,729
Withholdings	83,821	101,350	57,021
Others	12,722	14,081	8,654
	\ 281,014	\ 268,348	\$ 191,166
Non-current:			
Long-term unearned revenue	\ -	\ 229	\$ -
Long-term withholdings	37,334	37,357	25,397
Long-term advances received	-	1,923	-
Others	28,987	42,146	19,719
	\ 66,321	\ 81,655	\$ 45,116
Total	\ 347,335	\ 350,003	\$ 236,282

17. Retirement benefits

The Company and some subsidiaries operate a defined benefit pension plan and a defined contribution pension plan for its employees and uses the projected unit credit method in the actuarial valuation of plan assets and the defined benefit obligation.

17.1 The amounts recognized as expenses under the defined contribution pension plan for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Defined contribution retirement benefit expense	\ 5,605	\ 3,769	\$ 3,813

17.2 Details of net defined benefit liabilities (assets) as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Present value of defined benefit obligation	\ 268,720	\ 248,763	\$ 182,803
Fair value of plan assets	(333,634)	(303,342)	(226,962)
Net defined benefit liabilities	9,502	8,823	6,464
Net defined benefit assets	(74,416)	(63,402)	(50,623)

17.3 Changes in the present values of defined benefit obligations for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Beginning balance	\ 248,763	\ 173,224	\$ 169,227
Current service cost	26,176	23,575	17,807
Interest cost	10,012	11,068	6,811
Benefits paid	(35,394)	(27,248)	(24,078)
Increase due to business combination	-	45,657	-
Re-measurement loss(gain) in OCI:	19,318	22,932	13,141
- Actuarial changes arising from changes in demographic assumptions	534	58	363
- Actuarial changes arising from changes in financial assumptions	11,277	15,988	7,671
- Others	7,507	6,946	5,107
Others	(155)	(505)	(105)
Ending balance	\ 268,720	\ 248,703	\$ 195,944

17.4 Changes in the fair values of plan assets for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Beginning balance	\ 303,342	\ 210,537	\$ 206,355
Contribution by the employer	43,183	46,245	29,376
Interest income	10,146	13,531	6,902
Benefits paid	(25,130)	(25,561)	(17,095)
Increase due to business combination	-	58,634	-
Re-measurement gain (loss) in OCI:			
- Actuarial changes arising from changes in financial assumptions	4,107	309	2,794
Others	(2,014)	(353)	(1,370)
Ending balance	\ 333,634	\ 303,342	\$ 226,962

17.5 The components of plan assets as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Debt products	\ 88,661	\ 69,714	\$ 60,314
Deposit product	26,580	135,658	18,082
Others	218,393	97,970	148,567
	<u>\ 333,634</u>	<u>\ 303,342</u>	<u>\$ 226,963</u>

17.6 The gains and losses recognized in relation to defined benefit plans for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Current service cost	\ 26,176	\ 23,575	\$ 17,807
Net interest on net defined benefit	(134)	(2,463)	(91)
	<u>\ 26,042</u>	<u>\ 21,112</u>	<u>\$ 17,716</u>

17.7 Details of remeasurement gains (losses) recorded in other comprehensive income for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Re-measurement of defined benefit obligation	\ (19,318)	\ (22,992)	\$ (13,141)
Re-measurement of plan assets	4,107	309	2,794
	\ (15,211)	\ (22,683)	\$ (10,347)
Income tax effect	4,282	5,440	2,913
Other comprehensive income	<u>\ (10,929)</u>	<u>\ (17,243)</u>	<u>\$ (7,434)</u>

17.8 The principal assumptions used in actuarial valuations as of December 31, 2024 and 2023 are as follows:

	Dec. 31, 2024	Dec. 31, 2023
Discount rate	3.22% - 7.10%	4.28% - 7.50%
Expected future salary growth rate	2.80% - 10.00%	2.90% - 10.00%

The sensitivity analysis on defined benefit obligations arising from changes in the principal assumptions as of December 31, 2024 is as follows:

	Discount rate		Expected future salary growth rate	
	1% point increase	1% point decrease	1% point increase	1% point decrease
Amount (Korean won in millions)	\ (20,346)	\ 21,518	\ 21,090	\ (20,364)
Amount (U.S. dollar in thousands)	\$ (13,841)	\$ 14,638	\$ 14,347	\$ (13,853)
Rate	(7.57%)	8.01%	7.85%	(7.58%)

17.9 Details of impact on defined benefit plans for future cash flows are as follows:

There are no additional estimated contributions for the fiscal year ending December 31, 2025. The maturity profile of the Group's undiscounted pension benefit payments for the year ended December 31, 2024 is as follows:

	Korean won in millions			
	Less than 1 year	1 year to 5 years	Over 5 years	Total
Benefits paid	\ 15,687	\ 103,177	\ 518,398	\ 637,262
U.S. dollar in thousands	\$ 10,671	\$ 70,188	\$ 352,652	\$ 433,512

The weighted average maturity of the Company's defined benefit obligations is 8.44 years.

18. Provisions

18.1 Details of provisions as of December 31, 2024 and 2023 are as follows:

	December 31, 2024		December 31, 2023	
	Current	Non-current	Current	Non-current
Provision for bonus, etc.	\ 35,033	\ -	\ 28,296	\ -
Provision for REC (*1)	64,249	-	64,166	-
Provision for LTSA (*2)	7,100	-	6,963	16,262
Provision for emission rights (see Note 19)	-	5,750	2,945	5,750
Provision for sales guarantee	-	192	-	158
Provision for contingency (see Note 20)	-	22,056	-	21,902
Provision for restoration (*3) (see Note 20)	-	125,435	-	90,643
	\ 106,382	\ 153,433	\ 102,370	\ 134,715
U.S. dollar in thousands	\$ 72,369	\$ 104,376	\$ 69,639	\$ 91,643

(*1) In accordance with Article 12-5 of the *Act on the Promotion of The Development, Use and Diffusion of New and Renewable Energy*, the Group has an obligation to supply more than a certain amount of power generation using new and renewable energy. In accordance with the Act, the amount required to fulfill its obligations, including the amount of insufficient supply among the supply using new and renewable energy that the Group had to bear during the current period, was estimated and set as a provision.

(*2) The Group estimated the costs expected to be borne in the future in relation to fuel cell long-term service agreement (the "LTSA") and set them as provisions.

(*3) The Group recorded provisions for restoration subject to the obligations to restore mining areas and office leases.

18.2 Changes in provisions for each of the two years in the period ended December 31, 2024 are as follows:

2024								
Korean won in millions								
	Provision for bonus, etc.	Provision for REC	Provision for emission rights	Provision for contingency	Provision for restoration	Provision for sales guarantee	Provision for LTSA	Total
Beginning balance	₩ 28,296	₩ 64,166	₩ 8,695	₩ 21,902	₩ 90,643	₩ 158	₩ 23,225	₩ 237,085
Increase	50,456	64,249	-	9,086	21,114	102	2,278	147,285
Reversal	(1,354)	-	(2,945)	(8,311)	-	(68)	(1,437)	(14,115)
Used	(42,556)	(64,166)	-	(2,654)	(573)	-	(16,966)	(126,915)
Foreign currency translation	394	-	-	2,033	8,791	-	-	11,218
Others	(203)	-	-	-	5,460	-	-	5,257
Ending balance	₩ 35,033	₩ 64,249	₩ 5,750	₩ 22,056	₩ 125,435	₩ 192	₩ 7,100	₩ 259,815
U.S. dollar in thousands	\$ 23,832	\$ 43,707	\$ 3,912	\$ 15,004	\$ 85,330	\$ 131	\$ 4,830	\$ 176,745
Current	₩ 35,033	₩ 64,249	₩ -	₩ -	₩ -	₩ -	₩ 7,100	₩ 106,382
U.S. dollar in thousands	\$ 23,832	\$ 43,707	\$ -	\$ -	\$ -	\$ -	\$ 4,830	\$ 72,369
Non-current	₩ -	₩ -	₩ 5,750	₩ 22,056	₩ 125,435	₩ 192	₩ -	₩ 153,433
U.S. dollar in thousands	\$ -	\$ -	\$ 3,912	\$ 15,004	\$ 85,330	\$ 131	\$ -	\$ 104,376

2023								
Korean won in millions								
	Provision for bonus, etc.	Provision for REC	Provision for emission rights	Provision for contingency	Provision for restoration	Provision for sales guarantee	Provision for LTSA (*1)	Total
Beginning balance	₩ 33,208	₩ -	₩ -	₩ 19,976	₩ 74,969	₩ 1,011	₩ -	₩ 129,164
Increase due to merger	-	123,073	13,402	-	2,858	-	97,928	237,261
Increase	37,757	64,166	2,945	3,740	12,018	14	2,431	123,071
Reversal	(2,102)	-	(7,652)	(42)	(80)	(867)	(19,823)	(30,566)
Used	(40,559)	(123,073)	-	(2,009)	(693)	-	(57,311)	(223,645)
Foreign currency translation	56	-	-	237	1,579	-	-	1,872
Others	(64)	-	-	-	(8)	-	-	(72)
Ending balance	₩ 28,296	₩ 64,166	₩ 8,695	₩ 21,902	₩ 90,643	₩ 158	₩ 23,225	₩ 237,085
U.S. dollar in thousands	\$ 19,249	\$ 43,650	\$ 5,915	\$ 14,899	\$ 61,662	\$ 107	\$ 15,799	\$ 161,282
Current	₩ 28,296	₩ 64,166	₩ 2,945	₩ -	₩ -	₩ -	₩ 6,963	₩ 102,370
U.S. dollar in thousands	\$ 19,249	\$ 43,650	\$ 2,003	\$ -	\$ -	\$ -	\$ 4,737	\$ 69,639
Non-current	₩ -	₩ -	₩ 5,750	₩ 21,902	₩ 90,643	₩ 158	₩ 16,262	₩ 134,715
U.S. dollar in thousands	\$ -	\$ -	\$ 3,912	\$ 14,899	\$ 61,662	\$ 107	\$ 11,063	\$ 91,643

(*1) For the year ended December 31, 2023, provisions amounting to \ 15,993 million (\$10,839 thousand) were reversed due to the notice of termination of the long-term maintenance contract with CGN YULCHON GENERATION CO., LTD., and the amount used includes costs amounting to \ 46,217million (\$31,440 thousand) from facility replacement of Noeul Green Energy Co., Ltd.

19. Greenhouse gas emission rights and liabilities

19.1 Greenhouse gas emission rights held for the purpose of fulfilling obligations

19.1.1 The quantity of free emission rights allocated to the Company for the 3rd commitment period (compliance year 2022 to 2025) is as follows:

Ton (tCO2-eq)				
	For 2022 (KAU22)	For 2023 (KAU23)	For 2024 (KAU24)	For 2025 (KAU25)
Free emission rights (*1)	4,149,936	4,218,056	5,340,356	5,091,720
	Total			
	18,800,068			

(*1) Presenting the free emission rights succeeded due to the merger.

19.1.2 Changes in the quantity and book values of the emission rights for each of the two years in the period ended December 31, 2024 are as follows:

	Ton (tCO2-eq)			Total
	For 2023 (KAU23)	For 2024 (KAU24)	For 2025 (KAU25)	
<Quantity>				
Beginning balance	4,029,791	5,120,725	4,870,725	14,021,241
Additional allocation and cancellation	1,481,073	-	-	1,481,073
Purchase	-	-	220,995	220,995
Sell	(1,073,177)	-	-	(1,073,177)
Submit emission rights	(4,218,056)	-	-	(4,218,056)
Carried over	(219,631)	219,631	-	-
Ending balance	-	5,340,356	5,091,720	10,432,076
	Korean won in millions			Total
	For 2023 (KAU23)	For 2024 (KAU24)	For 2025 (KAU25)	
<Book value>				
Beginning balance	\ 5,923	\ -	\ -	\ 5,923
Additional allocation and cancellation	-	-	-	-
Purchase	-	-	5,923	5,923
Sell	(5,923)	-	-	(5,923)
Submit emission rights	-	-	-	-
Carried over	-	-	-	-
Ending balance	\ -	\ -	\ 5,923	\ 5,923
U.S. dollar in thousands	\$ -	\$ -	\$ 4,029	\$ 4,029

19.1.3 There are no emission permits provided as collateral as of December 31, 2024.

19.1.4 The Group did not hold greenhouse gas emission rights for short-term trading profits as of December 31, 2024.

19.2 Emission liabilities

19.2.1 The estimated quantity of the Company's greenhouse gas emissions as of December 31, 2024 is 4,825,109 tons (tCO2-eq) for the compliance year 2024.

19.2.2 Changes in emission liabilities for the year ended December 31, 2024 are as follows:

	Korean won in millions			U.S. dollar in thousands
	Current	Non-current	Total	Total
Beginning balance	\ 2,945	\ 5,750	\ 8,695	\$ 5,915
Reversal	(2,945)	-	(2,945)	(2,003)
Ending balance	\ -	\ 5,750	\ 5,750	\$ 3,912
U.S. dollar in thousands	\$ -	\$ 3,912	\$ 3,912	

20. Commitments and contingencies

20.1 Provision for contingencies

Changes in provisions for contingencies for the year ended December 31, 2024 are as follows: (Korean won in millions)

	Beginning balance	Increase	Reversal	Used	Translation	Ending balance	Principal debt amount
Daewoo Corp. (EXIM India, etc.)	\ 4,178	\ 1,947	\ -	\ -	\ 561	\ 6,686	\ 322,160
Provision for litigation	581	-	(581)	-	-	-	-
Provision for loss	17,143	7,139	(7,731)	(2,654)	1,473	15,370	-
	\ 21,902	\ 9,086	\ (8,312)	\ (2,654)	\ 2,034	\ 22,056	\ 322,160
U.S. dollar in thousands	\$ 14,899	\$ 6,181	\$ (5,654)	\$ (1,805)	\$ 1,384	\$ 15,004	\$ 219,156

20.1.1 Contingent liabilities carried over from Daewoo Corporation prior to the spin-off

On July 22, 2000, Daewoo Corporation, prior to the spin-off, approved a proposal to divide the company into one surviving company and two newly incorporated companies, which each company engages in the trade and construction sector, respectively. On December 27, 2000, the Group was newly incorporated as Daewoo International Corporation through a spin-off of Daewoo Corporation's trade sector.

IDBI, a creditor of Daewoo Motor India (DMIL), to which Daewoo Corporation provided debt guarantees, filed a lawsuit against DMIL, Daewoo Corporation, Daewoo Engineering & Construction and the Group in Delhi in May 2002 with regards to the disposition of assets and confirmation of the debt.

As of December 31, 2024, the Group has recorded \ 6,686 million (\$4,548 thousand) as provision for contingent losses by reasonably estimating the enforceability and amount of the lawsuit.

20.1.2 Contingent liabilities related to local taxes of foreign subsidiaries

As of December 31, 2024, the final calculated tax amount is being negotiated in relation to unconfirmed taxes for overseas subsidiaries. The amount and timing of resource outflows are uncertain, and the management of the consolidated company believes that the results of such tax imposition will not have a material impact on the financial condition of the consolidated company, as of December 31, 2024.

20.2 Pending litigations

As of December 31, 2024, the Group is a defendant in its pending lawsuits involving 23 claims (domestic: 5 claims and overseas: 18 claims). The total litigation value is \ 968 million (\$659 thousand) in Korea and in foreign countries (\$76,959 thousand, INR4,469,396 thousand, BRL 6,729 thousand, PKR 124,775 thousand and IDR 50,000 million). The Group records \ 6,686 million (\$4,548 thousand), an amount expected to be paid in accordance with some litigation cases, as a provision for contingent losses. Excluding these, the final results of pending litigation cases cannot be reasonably predicted, so the impact of the litigation results is not reflected in the Group's consolidated financial statements. Meanwhile, as of December 31, 2024, there are 27 lawsuits pending in which the consolidated company is the plaintiff.

20.3 Credit facilities

As of December 31, 2024, the Group has entered into an agreement with Woori Bank and others for the opening of L/C as follows: (Korean won in millions, USD in thousands)

Description	Description	Currency	Credit line amount
Local L/C	Woori Bank and others	KRW	180,000
Import L/C	Woori Bank and others	USD	1,303,506
Export Bill Negotiation	Woori Bank and others	USD	1,540,680
Export Bill Negotiation without recourse	Woori Bank and others	USD	1,387,500
Credit line in Korean won	Woori Bank and others	KRW	820,000
Credit line in foreign currency	Woori Bank and others	USD	1,491,312
P bond and others	Woori Bank and others	USD	393,398
P bond and others	Woori Bank and others	KRW	49,973
Overdraft and others	Standard Chartered Bank Korea	KRW	5,000
Supplier finance arrangement	Export-Import Bank of Korea	USD	120,000

20.4 Collateral

The Group has pledged 24 blank promissory notes and 18 blank checks as collateral to Korea Energy Agency for the contract performance guarantees and other purposes as of December 31, 2024.

20.5 Derivatives

20.5.1 Details of unsettled derivatives: (Korean won in millions)

Contract	Currency unit	Unsettled contractual amount		Accumulated valuation gain (loss)
		Long position	Short position	
Currency forwards	USD	557,112	1,165,265	\ (41,310)
	EUR	71,278	868,853	20,567
	JPY	185,888	332,003	5,104
	CNY	91,736	18,195	(425)
	THB	265	6,394	(37)
	CAD	346	-	(2)
	GBP	2,259	106,370	310
	AUD	55,923	137,752	3,938
	SGD	52	-	-
	PLN	4,817	30,657	243
				\ (11,612)
U. S. dollar in thousands				\$ (7,899)
Commodity futures	COPPER	5,735	19,916	\ 670
	CORN	17,603	34,769	(1,391)
	GASOIL	79	-	2
	MARINE FUEL	711	-	3
	NICKEL	54,925	137,283	11,165
	PX	-	17,243	111
	SOYBEAN	31,891	-	45
	SOYBEAN MEAL	2,345	2,389	44
				\ 10,649
U. S. dollar in thousands				\$ 7,244

20.5.1 Details of unsettled derivatives (Korean won in millions): (cont'd)

Details of unsettled currency swaps as of December 31, 2024 are as follows: (Korean won in millions, USD in thousands, SGD in thousands, EUR in thousands and JPY in thousands)

Bank	Payment		Receipt		Expiration date	Interest rate	Accumulated valuation gain (loss)
						Receive USD TERM 3M SOFR 3M + 1.50%	
Woori Bank	KRW	131,100	USD	100,000	Jul. 28, 2025		₩ 16,867
Credit Agricole CIB	USD	50,936	SGD	68,000	Oct. 25, 2025	Receive SGD SORA + 1.55%	(1,530)
Credit Agricole CIB	KRW	2,281	EUR	1,733	Apr. 22, 2025	Receive Euribor(6M) + 0.86%	462
Credit Agricole CIB	KRW	32,710	EUR	23,748	Oct. 22, 2026	Receive Euribor(6M) + 0.86%	4,175
KB Bank	USD	76,427	SGD	102,000	Oct. 25, 2025	Receive SGD SORA + 1.55%	(2,382)
Korea Development Bank	KRW	3,419	EUR	2,600	Apr. 22, 2025	Receive Euribor(6M) + 0.86%	703
MUFG Bank	KRW	47,700	JPY	5,000,000	Jul. 15, 2025	Receive JPY 3M D-TIBOR+0.85%	(1,226)
Sumitomo Mitsui Banking Corporation	KRW	47,640	JPY	5,000,000	Jul. 15, 2025	Receive 0.9%	(1,389)
ING	KRW	149,817	USD	111,000	Jun. 25, 2027	Receive USD TERM 3M SOFR 3M + 1.15%	13,078
							28,758
							\$ 19,563

U. S. dollar in thousands

Details of unsettled interest rate swaps as of December 31, 2024 are as follows: (Korean won in millions and USD in thousands)

Bank	Amount		Expiration date	Interest rate swap	Accumulated valuation gain (loss)
Shinhan Bank (Indonesia)	USD	6,301	Apr. 1, 2026	Receive Compound SOFR+ 1.961%, Pay 2.240%	₩ (483)
POSOO-ASIA	USD	3,500	Apr. 1, 2026	Receive Compound SOFR+ 1.928%, Pay 2.225%	(2,157)
					(2,640)
					\$ (1,796)

U. S. dollar in thousands

As of December 31, 2024, the Group has entered into currency forward contracts and commodity futures contracts with financial institutions for the purpose of hedging foreign exchange risks related to foreign currency debt obligations and the fair value risks associated with the purchase and sale of inventories.

20.5.2 Derivatives trading and valuation gains and losses

Changes in the book values of derivative financial assets (liabilities) for the year ended December 31, 2024 are as follows:

	Korean won in millions			
	Beginning balance	Settlement	Valuation gain (loss)	Ending balance
Currency forwards	\ (3,863)	\ 6,247	\ (10,969)	\ (8,585)
Commodity futures	6,322	(6,322)	10,649	10,649
Firm commitment contracts	(16,643)	2,349	6,535	(7,759)
Currency swap	5,804	(5,489)	28,444	28,759
	\ (8,380)	\ (3,215)	\ 34,659	\ 23,064
U.S. dollar in thousands	\$ (5,701)	\$ (2,187)	\$ 23,578	\$ 15,690

The Group has entered into product futures and other commitments for fair value hedges when hedging the exposure to changes in the fair value of firm sales and purchase contracts arising from fluctuations in product price, and applied fair value hedges using firm commitments as hedging methods and product futures and other commitments as hedging targets.

20.6 Guarantee obligations

20.6.1 Details of guarantees provided by the Group to certain creditors on behalf of associates/debtors as of December 31, 2024 are as follows: (Korean won in millions, U.S. dollar in thousands and Indonesian rupiah in millions)

Debtor	Creditor	Limit amount		outstanding balance		Year of expiration
		Foreign currency amounts	Korean won equivalent	Foreign currency amounts	Korean won equivalent	
GLOBAL KOMSOO Daewoo LLC	Hana Bank (Bahrain)	USD 6,650	9,776	USD 6,300	9,261	2025
POSCO ASSAN TST STEEL INDUSTRY	Citi Bank and others Bank	USD 13,650	20,066	USD 13,650	20,066	2026
KSU Mandob Sejatera	Muamalat	IDR 80,000	7,288	IDR 22,933	2,089	2026
		USD 20,300	29,842	USD 19,950	29,327	
		IDR 80,000	7,288	IDR 22,933	2,089	

20.7 Other commitments

20.7.1 Commitments to supplement funds for Korea Ambatovy Consortium (KAC)

The Group invested in the Ambatovy Nickel Project (“DMSA / ASMA”) in Madagascar through Korea Ambatovy Consortium (“KAC”), which is composed of Korea Mine Rehabilitation and Mineral Resources Corporation (“KOMIR”) and STX Co., Ltd. Sherritt International Corp., the operator, transferred part of the project shares to Sumitomo and Ambatovy Holdings Limited (“AHL”) in December 2017, and in August 2020 and the remaining shares were transferred to Sumitomo and Ambatovy Holdings II Limited (“AHL2”). KAC has the rights and obligations for the 15.33% stake in the project held by AHL and AHL2.

20.7.2 Environmental restoration expenses of Peru Block 8 and termination of mining contract

The Operator entered into a contract on the ratio of paying for environmental restoration cost with former operators. However, as the cost of environment restoration is expected to increase due to the revision of the local environmental law, the former operator refused to pay, and the Group applied for an arbitration. As a result of the arbitration in June 2018, the former operator is obligated for 94% of the cost for the pollution-prone areas where the responsibility of the former operator has already been proven and areas where the responsibility for pollution is proven in the future. As the procedure to obtain approval from the Peruvian government is in progress, the environmental restoration cost to be borne by the Group, the other participant and the former operator has not yet been determined.

The Peruvian Environmental Supervision Authority (El Organismo de Evaluación Fiscalización Ambiental, “OEFA”) has been imposing fines for environmental pollution on operators from 2020, and the fines imposed are shared by the participating companies if the operator makes a claim to the participating companies in proportion to their shares. The operator is not responsible for the pollution and is taking legal action arguing that the Environmental Supervision Administration unreasonably demands restoration and imposes a fine, but the fine continues to be imposed.

Perupetro, a mining rights management agency under the Peruvian government, opposed the termination of the mining rights contract and filed an international arbitration against mining concession participants at the International Chamber of Commerce (ICC). And, in February 2023, the International Chamber of Commerce's arbitration tribunal notified an interim partial ruling acknowledging the liquidation of the operator and the resulting termination of mining rights in Peru Block 8, and in December, notified a partial ruling ordering the return of Peru Block 8 to Perupetro. Korean participating companies are continuing to respond by jointly appointing an arbitration agent. In addition, the Korean participating companies additionally initiated a separate international arbitration with the International Chamber of Commerce (ICC) to force the operator and its parent company to jointly bear environmental restoration obligations.

The Group recognizes loss provisions and restoration provisions respectively in relation to environmental pollution fines and restoration costs for Peru Block 8.

20.7.3 Transfer of contract status on ship purchase agreement

The Group operates the chartered ship. The Group, the ship owner and the shipping company have entered into a ship purchase agreement, under which, the shipping company is obliged to pay the contract amount to the ship owner and take over the ownership of the ship from the ship owner at the end of the contract period due to the expiration or termination of the agreement. If the shipping company fails to fulfill its obligation to purchase ships, such as payment of the acquisition price of ships, the Group is obliged to take over the ship with the transfer of the shipping company's contractual obligations and rights. In December 2024, the ship purchase agreement was terminated earlier as the shipping company purchased one of the four chartered ships.

Details of the ship purchase arrangements concluded as of December 31, 2024 are as follows:

Ship	Ship owner	Shipping company	Arrangement period	U.S. dollar in thousands Purchase arrangement amount
Containership Heung-A Haiphong	D&M Shipping SA	Heung A Line Co., Ltd.	Dec. 29, 2014 - Mar. 16, 2025	7,700
Containership Heung-A Xiamen	D&F Shipping SA	Heung A Line Co., Ltd.	Feb. 5, 2015 - Mar. 17, 2025	7,700
Containership Heung-A Akita	D&S Shipping SA	Heung A Line Co., Ltd.	Mar. 5, 2015 - May 16, 2025	7,700
				\$ 23,100

The Group records lease liabilities and lease receivables for charter-in and charter-out contracts, respectively.

20.7.4 Long-term power supply and demand contract

The Group supplies the entire amount of electricity produced from Units 1 and 2 of the Offshore Combined Cycle Power Plant in Indonesia pursuant to a long-term power supply and demand contract with PT. KRAKATAU POSCO. The price of electricity supplied by the Group is determined by compensating for the cost of electricity production, a certain rate of return on investment in electricity production facilities, and related costs in accordance with the above contract. The expiration date of this Agreement is as follows:

	Expiration date
Units 1 of the Offshore Combined Cycle Power Plant in Indonesia	February 28, 2039
Units 2 of the Offshore Combined Cycle Power Plant in Indonesia	March 31, 2039

20.7.5 Deferred Premium Agreement

In relation to the equity investment in AES Mong Duong Power Co., Ltd. located in Vietnam, the Group pays a certain percentage of dividends to AES Mong Duong Holdings B.V. when it receives dividends from AES Mong Duong Power Co., Ltd. A premium agreement is being concluded, and related costs are accounted for as paid commissions.

20.7.6 Capital investment agreement

In the case of basic capital investment obligation according to the investor agreement, investment obligation of disallowed investment cost, investment obligation of excess project cost, and loss of profits within the deadline in financial documents, the Group provides the obligation to provide funds for the burden of the investment obligation under the investor agreement signed with Samcheok Blue Power Co., Ltd. for the construction of Samcheok Thermal Power Plant. Of these, the basic capital commitment obligation of \ 250,495 million (\$170,405 thousand) was completed during 2021.

20.7.7 Long-term purchase contract

The Group has entered into a long-term natural gas purchase contract with Korea Gas Corporation to procure entire amount of the natural gas required for the operation of Incheon LNG combined generating Units 5 to 9.

20.7.8 Agreements related to the Narrabri bituminous coal project

The Group has formed a consortium with the Korea Mine & Reclamation Corporation and is participating in a project to operate, produce, and sell bituminous coal mines in the coalfield area of New-South Wales, Australia. According to the business agreement, the shares held by the Group are held by the partner company. Preferential purchase rights are granted.

20.7.9 Korea Fuel Cell Fuel Cell Performance Guarantee Agreement

In relation to the supply of fuel cells, the Group provides a performance guarantee agreement guaranteeing a certain amount of output when signing a Long-Term Service Agreement with Gyeonggi Green Energy Co., Ltd., etc.

20.7.10 Cash deficiency support

The Group has agreed upon to replenish the entire facility loan amounting to \ 550,000 million (\$374,150 thousand) which is provided to NEH Co., Ltd. from the Industrial Bank of Korea and the Export-Import Bank of Korea in relation to the Gwangyang 2nd LNG Terminal project.

20.7.11 Supplier finance arrangement

The Group entered into a supplier finance arrangement for trade payables through digital supply chain factoring, and the carrying amount of the financial liabilities related thereto is as follows:

	December 31, 2024	
	Korean won in millions	U.S. dollar in thousands
Trade payables	\ 4,622	\$ 3,144

20.8 Assets provided as collateral

Details of assets provided as collateral in relation to borrowings as of December 31, 2024 are as follows: (Korean won in millions)

Collateral provided by	Assets provided as collateral	Collateral amount	Creditor	Reason for providing collateral
POSCO INTERNATIONAL	Property, plant and equipment (Land, Buildings, etc.)	\ 366,212	Korea Development Bank, Nord LB and KfW-IPEX Bank	Raising facility funds and operating funds
POSCO MOBILITY SOLUTION	Land and Buildings	252,000	Woori Bank, KB Bank, Hana Bank and Shinhan Bank	Raising facility funds and operating funds
NEH Co., Ltd.	Land	660,000	Korea Development Bank and Export-Import Bank of Korea	Raising facility funds and operating funds
Shinan Green Energy Co., Ltd.	Property, plant and equipment (Land, Buildings, etc.)	204,000	Community Credit Cooperatives, TONGYANG LIFE INSURANCE CO., LTD. and Industrial Bank of Korea	Raising facility funds and operating funds
PT. KRAKATAU POSCO ENERGY	Property, plant and equipment (Buildings, etc.)	261,566	Shinhan Bank (Indonesia) and POSCO-ASIA	Raising facility funds and operating funds

21. Issued capital, capital surplus and other capital components

21.1 Details of issued capital as of December 31, 2024 are as follows (Korean won in millions, Korean won for Par Value amount):

	Number of shares authorized	Number of shares issued	Par value	Issued capital	Paid-in capital in excess of par value (capital surplus)
Ordinary shares	500,000,000	175,922,788	\ 5,000	\ 879,614	\ 517,586
U.S. dollar in thousands				<u>\$ 598,377</u>	<u>\$ 352,099</u>

21.2 Changes in the number of issued shares of the Group for each of the two years in the period ended December 31, 2024 are as follows:

	2024			2023		
	Number of shares issued	Treasury stock	Number of outstanding shares	Number of shares issued	Treasury stock	Number of outstanding shares
Beginning	175,922,788	5,769,021	170,153,767	123,375,149	20,518	123,354,631
Increase due to merger	-	-	-	52,547,639	-	52,547,639
Acquisition of treasury stock	-	-	-	-	5,767,304	(5,767,304)
Disposal of treasury stock	-	(290,720)	290,720	-	(18,801)	18,801
Ending	<u>175,922,788</u>	<u>5,478,301</u>	<u>170,444,487</u>	<u>175,922,788</u>	<u>5,769,021</u>	<u>170,153,767</u>

21.3 Details of capital surplus as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Paid-in capital in excess of par value	\ 517,586	\ 517,586	\$ 352,099
Loss on disposal of hybrid bonds	(429)	(429)	(292)
Other capital surplus	1,319,574	1,309,068	897,669
	<u>\ 1,836,731</u>	<u>\ 1,826,225</u>	<u>\$ 1,249,476</u>

21.4 Other capital components as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Treasury stock	\ (27,695)	\ (29,164)	\$ (18,840)
Other capital adjustments	(8,026)	4,203	(5,460)
	<u>\ (35,721)</u>	<u>\ (24,961)</u>	<u>\$ (24,300)</u>

21.5 Treasury stock

The Group holds its treasury stock for purposes such as stabilizing the stock price in accordance with the resolution of the Board of Directors. Changes in the treasury stock of the Group for each of the two years in the period ended December 31, 2024 are as follows:

	Number of Shares	Amount (Korean won in millions)	Amount (U.S. dollar in thousands)
Beginning	5,769,021	\ (29,164)	\$ (19,839)
Acquisition of treasury stock	-	-	-
Disposal of treasury stock	(290,720)	1,469	999
Ending	5,478,301	\ (27,695)	\$ (18,840)

	2023		
	Number of Shares	Amount (Korean won in millions)	Amount (U.S. dollar in thousands)
Beginning	20,518	\ (423)	\$ (288)
Acquisition of treasury stock	5,767,304	(28,836)	(19,616)
Disposal of treasury stock	(18,801)	95	65
Ending	5,769,021	\ (29,164)	\$ (19,839)

21.6 Hybrid bonds

For the year ended December 31, 2023, the Group acquired hybrid bonds through the business combination, and the hybrid bonds are bond-type hybrid securities classified as equity. For the year ended December 31, 2023, the entire amount of hybrid bonds amounting to \ 139,571 million (\$94,946 thousand) was repaid.

22. Accumulated other comprehensive income

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

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Loss on valuation of financial assets at FVOCI	\ (18,491)	\ (36,745)	\$ (12,579)
Change in equity adjustment in equity method	133,621	99,916	90,899
Negative change in equity adjustment in equity method	(25,455)	(25,549)	(17,316)
Cumulative exchange differences on translations of foreign operations	139,054	48,164	94,595
Loss on valuation of derivatives	49	(86)	33
	\ 228,778	\ 85,700	\$ 155,632

23. Retained earnings

23.1 Details of retained earnings as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Legal reserve (*1)	\ 110,144	\ 93,100	\$ 74,928
Voluntary reserve (*2)	2,412,400	1,984,400	1,641,088
Unappropriated retained earnings	1,112,605	1,259,180	756,874
	<u>\ 3,635,149</u>	<u>\ 3,336,680</u>	<u>\$ 2,472,890</u>

(*1) In accordance with the *Commercial Act* of the Republic of Korea, the Group is required to accumulate at least 10% of the dividend from cash dividends in the consolidated statement of financial position as reserve for profits until the balance reaches 50% of the paid-in capital. It can be used to transfer capital or to protect deficits.

(*2) The voluntary reserve for the Group is the full amount of the business expansion reserves.

23.2 Details of dividends declared for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in thousands		U.S. dollar
	2024	2023	2024
Dividends per share (Korean won and %)	\ 1,550(31%)	\ 1,000(20%)	\$ 1.05(31%)
Number of shares	170,444,487	170,444,487	170,444,487
Dividends	<u>\ 264,188,955</u>	<u>\ 170,444,487</u>	<u>\$ 179,720,378</u>

24. Expenses by nature

The classifications of expenses by nature for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Raw materials used and changes in inventory assets, etc.	\ 28,770,935	\ 29,793,850	\$ 19,572,065
Employee benefits	488,498	466,454	332,312
Depreciation (*1)	279,108	278,147	189,869
Amortization	232,203	259,892	157,961
Water cost for electricity	62,999	49,222	42,856
Commissions	132,933	94,779	90,431
Transportation and storage costs	386,441	355,478	262,885
Others	870,755	671,887	592,350
	<u>\ 31,223,872</u>	<u>\ 31,969,709</u>	<u>\$ 21,240,729</u>

(*1) Including the depreciation of investment property.

25. Selling and administrative expenses

Details of selling and administrative expenses for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Salaries	\ 341,551	\ 310,216	\$ 232,348
Retirement benefits	38,649	15,879	26,292
Employee welfare	74,264	66,839	50,520
Travel	17,225	14,996	11,718
Communication	9,434	6,704	6,418
Utilities	7,371	5,846	5,014
Taxes and dues	12,153	10,783	8,267
Rents	19,055	17,010	12,963
Depreciation	25,168	22,179	17,121
Amortization	11,116	9,563	7,562
Depreciation of right-of-use assets	17,014	15,855	11,574
Repairs	3,138	2,622	2,135
Insurance	27,329	28,119	18,591
Entertainment	3,650	3,727	2,483
Advertisement	5,092	4,331	3,464
Shipping	41,028	44,911	27,910
Commissions	113,759	95,885	77,387
Bad debt expenses (reversal)	(17,648)	(24,122)	(12,005)
Supplies expenses	4,857	3,551	3,304
Vehicles maintenance	2,053	3,148	1,397
Publication	595	766	405
Education and training	5,552	4,226	3,777
Development expenses	3,496	3,974	2,378
Sales promotional	3,040	3,258	2,068
Miscellaneous expenses	515	629	350
Others	9,606	5,527	6,535
	\ 779,062	\ 676,422	\$ 529,976

26. Finance income and costs

26.1 Details of finance income for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
<Finance income>			
Interest income	\ 62,695	\ 61,563	\$ 42,650
Financial guarantee income	104	76	71
Dividends income	309	386	210
Gains on foreign currency transactions	654,202	777,499	445,035
Gains on foreign currency translation	266,832	82,268	181,518
Gains on valuation of derivatives	159,997	46,388	108,841
Gains on settlement of derivatives	280,725	296,570	190,969
Gains on valuation of trade payable	-	1,867	-
Gains on valuation of trade receivables	38	-	26
Gains on valuation of financial assets at FVPL	3,175	7,923	2,160
Gains on disposal of financial assets at FVPL	9,059	7,735	6,163
	\ 1,437,136	\ 1,282,275	\$ 977,643
<Finance cost>			
Losses on disposal of trade receivables	\ 67,756	\ 71,339	46,093
Interest expenses	292,371	282,071	198,892
Financial guarantee expenses	8	113	5
Losses on foreign currency transactions	563,563	737,396	383,376
Losses on foreign currency translation	377,075	119,309	256,514
Losses on valuation of derivatives	125,338	80,732	85,264
Losses on settlement of derivatives	283,528	272,350	192,876
Losses on valuation on trade receivables	1,657	5,405	1,127
Losses on valuation on financial assets at FVPL	259	3,145	176
Losses on disposal of financial assets at FVPL	26	240	18
	\ 1,711,581	\ 1,572,100	\$ 1,164,341

26.2 Details of interest income for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Interest income on cash equivalents	\ 33,093	\ 40,717	\$ 22,512
Other interest income	29,602	20,846	20,137
	\ 62,695	\ 61,563	\$ 42,649

26.3 Details of interest expenses for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Interest on borrowings and bonds	\ 292,560	\ 269,131	\$ 199,020
Interest on lease liability	22,273	20,439	15,152
Less: amount included in the cost of qualifying assets	(22,462)	(7,499)	(15,280)
	\ 292,371	\ 282,071	\$ 198,892

27. Other income and expenses

Details of other income for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
<Other income>			
Gain on disposal of property, plant and equipment	\ 8,975	\ 904	\$ 6,105
Gain on disposal of intangible assets	3,408	33	2,318
Gain on termination of lease contract	-	338	-
Gain from disposal of assets held for sale	-	7,461	-
Reversal of provisions for contingencies	8,481	122	5,769
Reversal of other allowance for doubtful accounts	289	123	197
Gain on disposal of investments in associates	-	1,043	-
Rental income	12	318	8
Gain from disposal of carbon emissions rights	-	7	-
Miscellaneous income	19,171	11,068	13,041
	<u>\ 40,336</u>	<u>\ 21,417</u>	<u>\$ 27,438</u>
<Other expenses>			
Contribution to provisions for restoration	\ 4,313	\ 5,131	\$ 2,934
Other bad debt expenses	21,498	9,444	14,624
Loss on disposal of property, plant and equipment	5,771	6,552	3,926
Loss on impairment of property, plant and equipment	73,421	8,622	49,946
Loss on disposal of intangible assets	98	142	67
Loss on impairment of intangible assets	9,722	9,287	6,614
Donations	17,413	4,242	11,846
Contingencies	10,683	3,740	7,267
Loss on disposal of investments in associates	28,765	5,373	19,568
Impairment loss on investment in associates	117,217	-	79,739
Miscellaneous expenses	15,046	18,856	10,235
	<u>\ 303,947</u>	<u>\ 71,389</u>	<u>\$ 206,766</u>

28. Income taxes

28.1 The major components of income tax expenses for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Current income taxes	\ 217,080	\ 238,426	\$ 147,673
Changes in deferred income tax arising from temporary differences and others	1,140	(16,066)	776
Tax deficit carryforwards and others	(1,871)	(3,197)	(1,273)
Income tax charged directly to equity	(13,143)	15,040	(8,941)
Income tax expenses	<u>\ 203,206</u>	<u>\ 234,203</u>	<u>\$ 138,235</u>

28.2 A reconciliation between income tax expenses at the effective income tax rates of the Group and income before income taxes at the statutory tax rate of the Republic of Korea for each of the two years in the period ended December 31, 2024 is as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Accounting profit before income tax	\ 706,616	\ 914,622	\$ 480,691
Tax at the statutory tax rate	\ 176,185	\ 231,098	\$ 119,854
Adjustments:			
Non-taxable income	-	(1,204)	-
Non-deductible expenses	284	284	193
Tax credits	(63,809)	(78,470)	(43,407)
Others (*1)	90,546	82,495	61,596
Income tax expense	\ 203,206	\ 234,203	\$ 138,236
Effective income tax rates	28.76%	25.61%	28.76%

(*1) Including direct foreign taxes paid.

28.3 Details of income taxes charged directly to equity for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Loss (gain) on valuation of financial assets at FVOCI	\ (6,212)	\ 1,383	\$ (4,226)
Remeasurement loss (gain) on defined benefit liabilities	(3,423)	5,440	(2,329)
Gain on valuation of financial assets at FVOCI	(1,713)	(8,943)	(1,165)
Exchange differences on translation of foreign operations	(8,861)	(4,216)	(6,028)
Loss (gain) on disposal of financial assets at FVOCI	10,263	-	6,982
Gain from disposal of treasury stock	(3,197)	(72)	(2,175)
Business combination under common control	-	21,448	-
	\ (13,143)	\ 15,040	\$ (8,941)

28.4 Changes in deferred tax assets and liabilities for each of the two years in the period ended December 31, 2024 are as follows: (Korean won in millions)

2024					
	Beginning balance	Recognized in profit or loss	Recognized directly to equity	Merger effect	Ending balance
Valuation of derivatives	\ 5,381	\ (14,407)	\ -	\ -	\ (9,026)
Loss on impairment of investments	48,368	(16,632)	-	-	31,736
Equity in subsidiaries and associates	190,850	62,900	(1,713)	-	252,037
Provisions of retirement benefits	59,383	3,598	(3,423)	-	59,558
Retirement insurance deposits	(63,437)	(18,057)	-	-	(81,494)
Debt restructuring	(4,007)	19	-	-	(3,988)
Extraordinary loss	5,397	11	-	-	5,408
Allowance for doubtful accounts	31,248	8,426	-	-	39,674
Depreciation	78,321	(359)	-	-	77,962
Capitalized borrowing costs	(7,855)	3,313	-	-	(4,542)
Accrued expenses	15,371	4,188	-	-	19,559
Foreign currency translation	(515)	444	-	-	(71)
Equity instruments valuation at FVOCI	12,039	222	(6,212)	-	6,049
Financial guarantee liabilities	1,796	1,024	-	-	2,820
Borrowings with low interest rates	-	-	-	-	-
Contingent loans	17,593	6,676	-	-	24,269
Accrued revenue	(7,748)	1,219	-	-	(6,529)
Provisions	34,204	(2,481)	-	-	31,723
Treasury stock (merger of energy)	21,448	(1,244)	-	-	20,204
Others	119,473	14,110	(8,861)	-	124,722
	\ 557,310	\ 52,970	\ (20,209)	\ -	\ 590,071
Tax credit carryforwards (*1)	(143,779)	(32,030)	-	-	(175,809)
	\ 413,531	\ 20,940	\ (20,209)	\ -	\ 414,262
U.S. dollar in thousands	\$ 281,314	\$ 14,245	\$ (13,748)	\$ -	\$ 281,811
2023					
	Beginning balance	Recognized in profit or loss	Recognized directly to equity	Merger effect	Ending balance
Valuation of derivatives	\ 217	\ 6,336	\ -	\ (1,172)	\ 5,381
Loss on impairment of investments	48,368	-	-	-	48,368
Equity in subsidiaries and associates	121,097	78,696	(8,943)	-	190,850
Provisions of retirement benefits	42,486	3,000	5,440	8,457	59,383
Retirement insurance deposits	(43,065)	(9,028)	-	(11,344)	(63,437)
Debt restructuring	(4,007)	-	-	-	(4,007)
Extraordinary loss	4,891	506	-	-	5,397
Allowance for doubtful accounts	31,838	(8,244)	-	7,654	31,248
Depreciation	74,322	2,882	-	1,117	78,321
Capitalized borrowing costs	(10,902)	3,047	-	-	(7,855)
Accrued expenses	17,078	(1,707)	-	-	15,371
Foreign currency translation	615	500	-	(1,630)	(515)
Equity instruments valuation at FVOCI	4,284	109	1,383	6,263	12,039
Financial guarantee liabilities	1,887	(91)	-	-	1,796
Borrowings with low interest rates	(60)	60	-	-	-
Contingent loans	14,806	2,787	-	-	17,593
Accrued revenue	8,289	19,580	-	(35,617)	(7,748)
Provisions	11,295	(27,999)	-	50,908	34,204
Treasury stock (merger of energy)	-	-	21,448	-	21,448
Others	81,708	(1,340)	(4,216)	43,321	119,473
	\ 405,147	\ 69,094	\ 15,112	\ 67,957	\ 557,310
Tax credit carryforwards (*1)	(77,818)	(64,943)	-	(1,018)	(143,779)
	\ 327,329	\ 4,151	\ 15,112	\ 66,939	\ 413,531
U.S. dollar in thousands	\$ 222,673	\$ 2,824	\$ 10,280	\$ 45,537	\$ 281,314

(*1) As of December 31, 2024 and 2023, the amounts related to investments in subsidiaries and associates that are not recognized as deferred tax assets and liabilities are deductible temporary differences of \ 587,907 million (\$406,739 thousand) and \ 456,357 million (\$310,447 thousand), respectively.

28.5 The effect of uncertain income tax is considered in current tax assets and current tax liabilities.

28.6 The Global Anti-Base Erosion Model Rules (Pillar Two Model Rules) apply to multinational enterprises (MNEs) with annual revenue in excess of EUR 750 million per their consolidated financial statements. Under the Minimum Top-up tax subject to Pillar Two Model Rules, such taxes shall be paid to the authorities in the Jurisdiction where the parent company is domiciled. The Pillar Two Model Rules were adopted in the Republic of Korea where the Group is located at the end of 2023 and are applicable starting from January 1, 2024.

The Group does not recognize deferred tax assets and liabilities related to the Pillar Two income taxes and does not disclose the information related to deferred taxes by applying the temporary exception provisions for recognition and disclosure of deferred tax assets and liabilities related thereto. Meanwhile, the Group reviewed its corporate structure in consideration of the introduction of the Pillar Two legislation in various jurisdictions and found that the Pillar Two income tax has no impact on the consolidated financial statements.

29. Earnings per share

29.1 Earnings per share

Details of earnings per share for each of the two years in the period ended December 31, 2024 are as follows (Korean won in millions, except for per share amounts):

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Profit for the year attributable to ordinary equity holders of the parent (*1)	\ 514,555	\ 670,235	\$ 350,037
Weighted average number of ordinary shares outstanding (*2)	170,411,495	170,149,543	170,411,495
Basic earnings per share (Korean won, U.S dollar)	3,019	3,939	2.05

(*1) The amount for the year ended December 31, 2023 is the amount after deducting the after-tax interest amount on hybrid bonds from the parent company's owner's net profit.

(*2) The weighted average number of ordinary shares outstanding used to calculate basic earnings per share is as follows:

	2024	2023
Number of shares issued	175,922,788	175,922,788
Weighted average number of treasury stock	(5,511,293)	(5,773,245)
Weighted average number of ordinary shares outstanding	170,411,495	170,149,543

29.2 Diluted earnings per share

Diluted earnings per share are consistent with basic earnings per share because there is no potential common stock that can be converted into common stock for each of the two years in the period ended December 31, 2024.

30. Fair value measurement

30.1 Fair value hierarchy

The following are the criteria for classifying fair value from Level 1 to Level 3, depending on how observable it is in the market.

- Level1 - Quoted (unadjusted) prices in active markets for identical assets or liabilities
- Level2 - Input variables for assets or liabilities observable either directly (e.g., price) or indirectly (e.g., derived from the price), except for the quoted prices included in Level
- Level3 - Input variables for assets or liabilities that are not based on observable market data (unobservable inputs)

30.2 Assumption used for fair value valuation technique

The fair value of financial instruments that are traded in active markets is determined based on quoted market prices at the end of reporting period. These instruments are included in Level 1, mostly are classified into financial assets at fair value which are listed stocks.

For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques. This valuation technique fully makes use of observable market information as possible and internal information at minimum. When every significant input variable required for measuring fair value of the instrument is observable, the instrument is classified into Level 2.

When one or more significant input variables are not based on observable market information, the instrument is classified into Level 3.

Valuation techniques used to measure fair values of instruments are:

- quoted prices or dealer prices of similar instrument;
- present value discounted by forward exchange rate as the end of reporting period is used for fair value of derivative instrument; and
- discounted cash flow and other techniques are used for other instruments.

Book values of instruments which are classified into same category with trade and other receivables are estimated as reasonable approximate values of fair value.

The Group considered the maturity interest rate of the Group in determining the fair value of the derivative financial assets, liabilities and bonds valued at Level 2 hierarchy.

30.3 Financial instruments by category

The carrying amounts and fair values of financial instruments of the Group as of December 31, 2024 and 2023 are as follows:

	December 31, 2024						U.S. dollar in thousand
	Korean won in millions						
	Book value	Level 1	Level 2	Level 3	Total	Total	
<Financial assets>							
Financial assets at FVPL							
Trade and other receivables	\ 39,445	\ -	\ 39,445	\ -	\ 39,445	\$ 26,833	
Long-term investment (*1)	437	-	-	437	437	297	
Other securities (*1)	12	-	-	12	12	8	
Other financial assets	67,391	-	67,391	-	67,391	45,844	
Derivative financial assets	122,890	-	122,890	-	122,890	83,599	
Financial assets at FVOCI							
Equity instruments (*1)	42,494	7,282	-	35,212	42,494	28,907	
Financial assets at amortized costs (*2)							
Cash and Cash equivalents	1,057,204	-	-	-	-	-	
Trade and other receivables (*3)	4,838,555	-	-	-	-	-	
Other securities	74,131	-	-	-	-	-	
<Financial liabilities>							
Financial liabilities at FVPL							
Derivative financial liabilities	\ 99,826	\ -	\ 99,826	\ -	\ 99,826	\$ 67,909	
Financial liabilities at amortized costs (*2)							
Trade and other receivables (*4)	3,275,608	-	-	-	-	-	
Borrowings	3,208,900	-	-	-	-	-	
Bonds	2,684,832	-	-	-	-	-	

(*1) For some of the financial assets, the acquisition cost was measured at fair value because sufficient information was not available to measure fair value during the current period and there was no clear evidence of value changes for each of the two years in the period ended December 31, 2024.

(*2) In the case of financial assets and financial liabilities measured at amortized cost, the book value is similar to the fair value, so the fair value is not separately disclosed.

(*3) Trade and other receivables and long-term trade and other receivables include \ 25,292 million (\$17,205 thousand) of current portion of lease receivables and \ 303,161 million (\$206,232 thousand) of long-term lease receivables, respectively.

(*4) Trade and other payables and long-term trade and other payables include \ 79,527 million (\$54,100 thousand) of current portion of lease liabilities and \ 334,273 million (\$227,396 thousand) of long-term lease liabilities, respectively.

30.3 Financial instruments by category (cont'd)

	December 31, 2023						U.S. dollar in thousand
	Korean won in millions						
	Book value	Level 1	Level 2	Level 3	Total	Total	
<Financial assets>							
Financial assets at FVPL							
Trade and other receivables	\ 6,419	\ -	\ 6,419	\ -	\ 6,419	\$ 4,367	
Long-term investment (*1)	1,783	-	-	-	-	-	
Other securities (*1)	4,849	-	-	5	5	3	
Other financial assets	146,760	-	146,760	-	146,760	99,837	
Derivative financial assets	44,562	-	44,562	-	44,562	30,314	
Financial assets at FVOCI							
Equity instruments (*1)	53,887	12,108	-	-	12,108	8,237	
Financial assets at amortized costs (*2)							
Cash and Cash equivalents	1,136,863	-	-	-	-	-	
Trade and other receivables (*3)	4,815,340	-	-	-	-	-	
Other securities	113,547	-	-	-	-	-	
<Financial liabilities>							
Financial liabilities at FVPL							
Derivative financial liabilities	\ 52,941	\ -	\ 52,941	\ -	\ 52,941	\$ 36,014	
Financial liabilities at amortized costs (*2)							
Trade and other receivables (*4)	3,428,592	-	-	-	-	-	
Borrowings	3,045,417	-	-	-	-	-	
Bonds	2,740,823	-	-	-	-	-	

(*1) For some of the financial assets, the acquisition cost was measured at fair value because sufficient information was not available to measure fair value during the current period and there was no clear evidence of value changes for each of the two years in the period ended December 31, 2023.

(*2) In the case of financial assets and financial liabilities measured at amortized cost, the book value is similar to the fair value, so the fair value is not separately disclosed.

(*3) Trade and other receivables and long-term trade and other receivables include \ 29,438 million (\$20,026 thousand) of current portion of lease receivables and \ 283,009 million (\$192,523 thousand) of long-term lease receivables, respectively.

(*4) Trade and other payables and long-term trade and other payables include \ 74,361 million (\$50,586 thousand) of current portion of lease liabilities and \ 347,466 million (\$236,271 thousand) of long-term lease liabilities, respectively.

30.4. Financial income (loss) by category of financial instruments

The Group's financial income and losses by category of financial instruments for each of the two years in the period ended December 31, 2024 are as follows: (Korean won in millions)

	Financial income (loss)															
	Interest income (expenses) (*1)	Foreign exchange gain (loss)	Disposal gain (loss)	Valuation gain (loss)	Dividend income	Others	Total	Other comprehensive income								
<2024>																
Financial assets at FVPL	\	-	\	289,757	\	161,294	\	8	\	-	451,059	\	-			
Financial assets at FVOCI	-	-	-	-	-	301	-	301	(17,286)							
Financial assets at amortized costs	62,695	416,811	(67,756)	-	-	-	411,750	-								
Financial liabilities at FVPL	-	-	(283,527)	(125,338)	-	-	(408,865)	-								
Financial liabilities at amortized costs	(292,371)	(436,414)	-	-	-	95	(728,690)	-								
Total	\	(229,676)	\	(19,603)	\	(61,526)	\	35,956	\	309	\	95	\	(274,445)	\	(17,286)
U.S. dollar in thousand	\$	(156,242)	\$	(13,335)	\$	(41,854)	\$	24,460	\$	211	\$	65	\$	(186,697)	\$	(11,759)
<2023>																
Financial assets at FVPL	\	42	\	-	\	304,305	\	45,761	\	10	\	-	\	350,118	\	-
Financial assets at FVOCI	-	-	-	-	-	376	-	-	-	376	(4,476)					
Financial assets at amortized costs	61,521	18,605	(71,339)	-	-	-	8,787	-								
Financial liabilities at FVPL	-	-	(272,590)	(78,865)	-	-	(351,455)	-								
Financial liabilities at amortized costs	(282,071)	(15,543)	-	-	-	(37)	(297,651)	-								
Total	\	(220,508)	\	3,062	\	(39,624)	\	(33,104)	\	386	\	(37)	\	(289,825)	\	(4,476)
U.S. dollar in thousand	\$	(150,005)	\$	2,083	\$	(26,955)	\$	(22,520)	\$	264	\$	(25)	\$	(197,160)	\$	(3,045)

(*1) Amounts of above financial income and losses by category of financial instruments include income and losses related to lease liabilities.

31. Financial instruments risk management

31.1 Capital risk management

The purpose of the Group's capital management is to maintain an optimal capital structure to protect the ability to continue to provide benefits to shareholders and stakeholders as a continuing entity and to reduce capital costs. In order to maintain or adjust the capital structure, the Group applies policies such as adjusting dividends.

Capital structure of the Group is composed of net borrowings, which are borrowings less cash and cash equivalents and equity. For the year ended December 31, 2024, the Group maintains the same capital risk management policies as those for the year ended December 31, 2023. Details of the capital components managed by the Group as of December 31, 2024 and 2023 are as follows:

	Korean won in millions		U.S. dollar in thousands
	Dec. 31, 2024	Dec. 31, 2023	Dec. 31, 2024
Total borrowings	\ 5,893,732	\ 5,786,241	\$ 4,009,341
Less: cash and cash equivalents	(1,057,204)	(1,136,863)	(719,186)
Net borrowings	\ 4,836,528	\ 4,649,378	\$ 3,290,155
Total equity	\ 7,349,463	\ 6,624,762	\$ 4,999,635
Gearing ratio	65.81%	70.18%	65.81%

31.2 Financial risk management

The Group is exposed to market risk (foreign currency risk and interest rate risk), credit risk, and liquidity risk. The purpose of Group's financial risk management is to detect potential risk which could decrease the Group's profit and to eliminate, reduce and hedge such risk to an acceptable level. The Group uses derivative financial instruments for hedging special risk such as foreign currency risk. Financial risk management policy of the Group for the year ended December 31, 2024 is consistent with that for the year ended December 31, 2023.

31.2.1 Market risk

Market risk is the risk that the fair value of financial instrument will fluctuate because of changes in market prices. Market prices comprise three types of risk: foreign currency risk, interest rate risk and other price risk.

31.2.1.1 Foreign currency risk

The Group is exposed to the risk of exchange rate fluctuations because it has transactions denominated in foreign currency. The book values of monetary assets and liabilities denominated in major foreign currencies other than functional currencies as of December 31, 2024 and 2023 are as follows:

	Korean won in million				U.S. dollar in thousand	
	December 31, 2024		December 31, 2023		December 31, 2024	
	Asset	Liability	Asset	Liability	Asset	Liability
USD	\ 2,959,687	\ 3,191,973	\ 2,898,496	\ 3,462,720	\$ 2,013,393	\$ 2,171,410
JPY	227,864	194,634	320,705	252,478	155,010	132,404
EUR	643,293	311,956	495,012	300,252	437,614	212,215
CNY	114,993	180,853	222,097	230,391	78,227	123,029

The effect that fluctuation in the exchange rate of 10% of the functional currency on each foreign currency has on profit or loss as of December 31, 2024 is as follows:

	Korean won in million		U.S. dollar in thousand	
	Increase by 10%	Decrease by 10%	Increase by 10%	Decrease by 10%
USD	\ (23,229)	\ 23,229	\$ (15,802)	\$ 15,802
JPY	3,323	(3,323)	2,261	(2,261)
EUR	33,134	(33,134)	22,540	(22,540)
CNY	(6,586)	6,586	(4,480)	4,480

31.2.1.2 Interest rate risk

The interest rate risk of the Group arises from borrowings and bonds. Due to short-term borrowings issued at floating interest rates, the Group is exposed to cash flow interest rate risk.

As of December 31, 2024, with all other variables remain constant, a change of 1% in the floating interest rate on borrowings will have an effect of \ 29,772 million (\$20,253 thousand) decrease or increase in the Group's income before income taxes.

31.2.2 Credit risk

Credit risk is the risk that counterparties will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group's exposure to the credit risk relates to operating and financial activities.

31.2.2.1 Trade and other receivables

It is the principle for the Group to conduct transactions only with those with sound financial status by performing credit verification procedures for all counterparties that desire credit transactions with the Group. In addition, the Group manages the balance of accounts receivable by continuously reevaluating credit ratings so that the level of the Group's exposure to the credit risk is maintained at an insignificant level.

31.2.2.2 Other assets

Credit risks associated with the Group's other assets which consist of cash, short-term deposits and short-term and long-term loans arise from the default by the counterparties. Maximum exposure to credit risks will be the book value of the other assets. The Group deposits cash and cash equivalents and short-term financial products at financial institutions such as Woori Bank, and deals with financial institutions with excellent credit ratings. So, credit risk from financial institutions is limited.

31.2.2.3 Maximum exposure to credit risk

The book value of a financial asset represents the maximum exposure to a credit risk. If a financial guarantee is provided, the maximum exposure to credit risk is the maximum amount due on the claims of the assured. For borrowing arrangements, the maximum exposure to credit risk is the total commitment amount. In addition, in the case of a borrowing agreement, the maximum exposure amount of credit risk is the balance of the applicable borrowing as of the end of the current year, and the limit of the agreement amount is detailed in Note 20.

31.2.2.4 Aging analysis of non-derivative financial instruments

The aging analysis on non-derivative financial instruments as of December 31, 2024 is as follows: (Korean won in millions)

	Not Past due	Past due				Total
		Within 1 month	1 to 3 months	3 to 12 months	Over 12 months	
Trade and other receivables (*1)	\ 4,582,040	\ 210,295	\ 51,096	\ 43,959	\ 165,632	\ 5,053,022
Other financial assets	184,466	-	-	-	-	184,466
	<u>\ 4,766,506</u>	<u>\ 210,295</u>	<u>\ 51,096</u>	<u>\ 43,959</u>	<u>\ 165,632</u>	<u>\ 5,237,488</u>
U.S. dollar in thousand	\$ 3,242,521	\$ 143,058	\$ 34,759	\$ 29,904	\$ 112,675	\$ 3,562,917

(*1) Trade and other receivables and long-term trade and other receivables include ₩25,292 million (\$17,205 thousand) of current lease receivables and ₩303,161 million (\$206,232 thousand) of long-term lease receivables, respectively.

31.2.3 Liquidity risk

The Group establishes short and long-term capital management plans and analyzes and reviews cash flow budgets against actual cash outflows in order to match the maturity of financial liabilities and financial assets. The Group believes that it has sufficient cash inflows from operating activities and financial assets to redeem financial liabilities that become due.

31.2.3.1 The maturity analysis based on the maturity of the remaining contract of financial liabilities outstanding as of December 31, 2024 is as follows. The maturity amount is an undiscounted contractual cash flow that includes interest payments. (Korean won in millions)

	Within 1 year	1 to 5 years	Over 5 years	Total
Trade and other payables (*1)	\ 2,932,833	\ 348,314	\ 369	\ 3,281,516
Derivative financial liabilities (*2)	99,826	-	-	99,826
Borrowings and bonds	3,202,674	2,442,262	399,302	6,044,238
	<u>\ 6,235,333</u>	<u>\ 2,790,576</u>	<u>\ 399,671</u>	<u>\ 9,425,580</u>
U.S. dollar in thousand	\$ 4,241,723	\$ 1,898,351	\$ 271,885	\$ 6,411,959

(*1) The Trade and other payables and the long-term trade and other payables include \ 79,527 million (\$54,100 thousand) of current portion of lease liabilities and \ 334,273 million (\$227,397 thousand) of long-term lease liabilities, respectively.

(*2) Derivative financial liabilities are settled on a net basis.

31.2.3.2 The maturity analysis based on the guarantee period of financial guarantee contracts as of December 31, 2024 is as follows: (Korean won in millions)

	Within 1 year	1 to 5 years	Over 5 years	Total
Financial guarantee contract (*1)	\ 9,261	\ 22,155	\ -	\ 31,416
U.S. dollar in thousand	\$ 6,300	\$ 15,071	\$ -	\$ 21,371

(*) The Group provides payment guarantees and Cash Deficiency Support to its associates and other related parties. For further information, see Note 20.

32. Related party transactions

32.1 Details of related parties as of December 31, 2024 are as follows:

	Company Name
Parent	POSCO Holdings Inc.
Associates and joint ventures	POSCO MEXICO PROCESSING CENTER HOLDING LLC., HUNCHUN POSCO HMM INTERNATIONAL LOGISTICS CO., LTD, POSCO-MALAYSIA SDN. BHD., POSCO-ITPC S.P.A, YULCHON MEXICO S.A. DE C.V., HYUNSON ENGINEERING & CONSTRUCTION, POSCO-ESDC LTD., POSCO IJPC, Inco tech Inc., SHINPOONG DAEWOO PHARMA VIETNAM CO., LTD., Shanghai Lansheng DAEWOO Corp, Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd., GENERAL MEDICINES CO., LTD., KOREA LNG LTD., DMSA/AMSA, SOUTH-EAST ASIA GAS PIPELINE CO., LTD., GLOBAL KOMSCO DAEWOO LLC., Blue Ocean Recovery PEF No.1, Gyeonggi Green Energy Co., Ltd., Noeul Green Energy Co., Ltd., Samcheok Blue Power Co., Ltd., MONG DUONG FINANCE HOLDINGS B.V (*1), ECO ENERGY SOLUTION CO., LTD., AES MONG DUONG Power Co., LTD (*1)
Other related parties (*2)	POSCO, PT. KRAKATAU POSCO, POSCO-THAINOX, POSCO ASSAN TST STEEL INDUSTRY, POSCO STEELEON Co., Ltd., POSCO-CSPC, POSCO VST CO., LTD., POSCO FLOW CO., LTD., POSCO YAMATO VINA STEEL JOINT STOCK COMPANY, POSCO-MKPC, POSCO ASIA CO., LTD., POSCO-TNPC, POSCO-FOSHAN STEEL PROCESSING CENTER CO., LTD., POSCO VIETNAM HOLDINGS, POSCO-CTPC, POSCO Eco & Challenge Co., Ltd., ZHANGJIAGANG POHANG STAINLESS STEEL CO., LTD., POSCO-VIETNAM CO., LTD., COMPANHIA SIDERURGICA DO PECÉM, POSCO MAHARASHTRA STEEL PVT. LTD., POSCO-IPPC, POSCO-ICPC, etc.

(*1) Investments in the associates and joint ventures marked above are reclassified as assets held for sale for the year ended December 31, 2024.

(*2) Other related parties are subsidiaries, associates, and joint ventures of POSCO Holdings Inc., the parent company.

32.2 Details of significant transactions with the related parties for each of the two years in the period ended December 31, 2024 are as follows: (Korean won in millions and U.S. dollar in thousands)

	2024					
	Sales and others			Purchase and others		
	Sales	Others	Total	Purchase	Others	Total
Parent company:						
POSCO Holdings Inc. (*1)	\ 111	\ 6	\ 117	\ 150	\ 7,299	\ 7,449
Associates:						
POSCO MEXICO PROCESSING CENTER HOLDING, LLC.	\ 739,259	\ -	\ 739,259	\ 12,295	\ 505	\ 12,800
Gyeonggi Green Energy Co., Ltd.	31,036	-	31,036	-	5,259	5,259
POSCO-MALAYSIA SDN.BHD.	107,399	-	107,399	9,993	-	9,993
POSCO-ITPC S.P.A.	114,707	-	114,707	243	-	243
Noeul Green Energy Co., Ltd.	-	82	82	-	2,658	2,658
YULCHON MEXICO S. A. DE C. V.	1,279	-	1,279	-	-	-
POSCO-ESDC LTD.	2	89	91	8,461	6,274	14,735
POSCO IJPC	287,607	-	287,607	16	-	16
Samcheok Blue Power Co., Ltd.	179,072	10,047	189,119	-	-	-
GENERAL MEDICINES CO., LTD.	329	-	329	-	-	-
KOREA LNG LTD.	-	17,829	17,829	-	-	-
AES Mong Duong Power CO., LTD.	2,152	34,821	36,973	-	969	969
SOUTH-EAST ASIA GAS PIPELINE CO., LTD.	-	64,208	64,208	-	-	-
GLOBAL KOMSCO DAEWOO LLC.	-	26	26	32,814	-	32,814
Others:						
POSCO	\ 3,039,389	\ 674	\ 3,040,063	\ 11,649,807	\ 491,666	\ 12,141,473
PT. KRAKATAU POSCO	1,311,869	-	1,311,869	251,645	4,083	255,728
POSCO STEELEON Co., Ltd.	57,324	-	57,324	256,278	674	256,952
POSCO-THAINOX	180,334	-	180,334	70,868	-	70,868
POSCO VST CO., LTD.	190,621	-	190,621	46,908	1,182	48,090
POSCO FLOW CO., LTD.	-	-	-	554	239,376	239,930
POSCO-CSPC	325,771	-	325,771	5,289	353	5,642
POSCO INDIA PC	202,787	-	202,787	70	-	70
POSCO VIETNAM PC	186,384	-	186,384	6,386	-	6,386
POSCO-MKPC	175,191	-	175,191	-	-	-
Others	2,465,276	1,028	2,466,304	1,525,047	306,945	1,831,992
	<u>\ 9,597,899</u>	<u>\ 128,810</u>	<u>\ 9,726,709</u>	<u>\ 13,876,824</u>	<u>\ 1,067,243</u>	<u>\ 14,944,067</u>
	<u>\$ 6,529,183</u>	<u>\$ 87,626</u>	<u>\$ 6,616,809</u>	<u>\$ 9,440,016</u>	<u>\$ 726,016</u>	<u>\$ 10,166,032</u>

32.2 Details of significant transactions with the related parties for each of the two years in the period ended December 31, 2024 are as follows: (Korean won in millions and U.S. dollar in thousands) (cont'd)

	2023					
	Sales and others			Purchase and others		
	Sales	Others	Total	Purchase	Others	Total
Parent company:						
POSCO Holdings Inc. (*1)	\ 263	\ -	\ 263	\ -	\ 79,866	\ 79,866
Associates:						
POSCO MEXICO PROCESSING CENTER HOLDING, LLC.	\ 582,242	\ -	\ 582,242	\ 11,940	\ 13	\ 11,953
Gyeonggi Green Energy Co., Ltd.	31,268	-	31,268	-	7,776	7,776
POSCO-MALAYSIA SDN.BHD.	89,813	-	89,813	5,987	-	5,987
POSCO-ITPC S.P.A.	78,469	-	78,469	1,480	24	1,504
Noeul Green Energy Co., Ltd.	6,499	28	6,527	-	10,321	10,321
YULCHON MEXICO S. A. DE C. V.	2,119	-	2,119	-	-	-
POSCO-ESDC LTD.	-	84	84	4,915	9,312	14,227
POSCO IJPC	295,267	-	295,267	89	-	89
Samcheok Blue Power Co., Ltd.	118,420	10,020	128,440	-	-	-
Mong Duong Finance Holdings B.V.	-	2,031	2,031	-	-	-
GENERAL MEDICINES CO., LTD.	1,354	428	1,782	-	-	-
KOREA LNG LTD.	-	21,106	21,106	-	-	-
AES Mong Duong Power CO., LTD.	2,666	33,839	36,505	-	-	-
SOUTH-EAST ASIA GAS PIPELINE CO., LTD.	-	59,295	59,295	-	-	-
GLOBAL KOMSCO DAEWOO LLC.	-	-	-	26,431	-	26,431
Blue Ocean Recovery PEF No.1	-	-	-	123	2,828	2,951
Others:						
POSCO	\ 3,178,025	\ 2,187	\ 3,180,212	\ 12,147,524	\ 418,962	\ 12,566,486
PT. KRAKATAU POSCO	999,800	-	999,800	267,760	1,954	269,714
POSCO-THAINOX POSCO STEELEON Co., Ltd.	210,862	-	210,862	88,733	-	88,733
POSCO-CSPC	64,411	-	64,411	221,961	169	222,130
POSCO ASSAN TST STEEL INDUSTRY	277,167	-	277,167	4,640	-	4,640
POSCO FLOW CO., LTD.	183,819	-	183,819	54,287	-	54,287
POSCO VST CO., LTD.	326	-	326	1,723	216,133	217,856
POSCO VIETNAM HOLDINGS	128,119	-	128,119	62,738	-	62,738
POSCO YAMATO VINA STEEL JOINT STOCK COMPANY	177,257	-	177,257	2,318	-	2,318
	149,054	-	149,054	54,393	18	54,411
Others	2,493,230	219	2,493,449	1,073,693	166,841	1,240,534
	\ 9,070,450	\ 129,237	\ 9,199,687	\ 14,030,735	\ 914,217	\ 14,944,952
	\$ 6,170,374	\$ 87,916	\$ 6,258,290	\$ 9,544,718	\$ 621,916	\$ 10,166,634

(*1) In addition to the above transactions, dividends paid to POSCO Holdings Inc. for each of the two years in the period ended December 31, 2024 amount to ₩124,396 million (\$84,623 thousand) and ₩77,616 million (\$52,800 thousand), respectively.

32.3 Details of significant outstanding balances of receivables from and payables to the related parties as of December 31, 2024 and 2023 are as follows: (Korean won in millions and U.S. dollar in thousands)

	December 31, 2024					
	Receivables (*1)			Payables		
	Trade receivables	Others	Total	Trade payables	Others	Total
Parent company:						
POSCO Holdings Inc.	\ -	\ 454	\ 454	\ -	\ 7,466	\ 7,466
Associates:						
POSCO MEXICO PROCESSING CENTER HOLDING, LLC.	\ 127,053	\ -	\ 127,053	\ 1,122	\ 222	\ 1,344
Gyeonggi Green Energy Co., Ltd.	5,846	10,706	16,552	-	567	567
POSCO-MALAYSIA SDN.BHD.	19,635	-	19,635	-	-	-
POSCO-ITPC S.P.A.	15,690	-	15,690	87	-	87
Noeul Green Energy Co., Ltd. YULCHON MEXICO S. A.	-	3,039	3,039	-	-	-
DE C. V.	402	-	402	-	-	-
POSCO-ESDC LTD.	3	-	3	957	896	1,853
POSCO IJPC	76,914	-	76,914	-	-	-
Samcheok Blue Power Co., Ltd.	-	144	144	-	-	-
Shanghai Lansheng DAEWOO Corp	2,627	-	2,627	-	437	437
Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	-	-	-	-	721	721
GENERAL MEDICINES CO., LTD.	577	485	1,062	-	-	-
DMSA/AMSA	-	117,444	117,444	-	-	-
GLOBAL KOMSCO DAEWOO LLC.	-	1,719	1,719	100	12	112
Others:						
POSCO	\ 239,068	\ 4,281	\ 243,349	\ 1,108,696	\ 38,829	\ 1,147,525
PT. KRAKATAU POSCO	545,241	243,140	788,381	19,501	13	19,514
POSCO-CSPC	75,431	1	75,432	-	-	-
POSCO-ICPC	65,368	-	65,368	-	-	-
POSCO Eco & Challenge Co., Ltd.	44,637	-	44,637	186	-	186
POSCO-TNPC	37,309	-	37,309	-	-	-
POSCO-CTPC	34,960	-	34,960	352	-	352
POSCO-FOSHAN STEEL PROCESSING CENTER CO., LTD.	56,074	375	56,449	-	-	-
POSCO VIETNAM HOLDINGS	24,716	181	24,897	3,824	100	3,924
POSCO ASSAN TST STEEL INDUSTRY	26,137	-	26,137	-	5	5
Others	310,869	27,527	338,396	130,764	268,558	399,322
	<u>\ 1,708,557</u>	<u>\ 409,496</u>	<u>\ 2,118,053</u>	<u>\ 1,265,589</u>	<u>\ 317,826</u>	<u>\ 1,583,415</u>
	<u>\$ 1,162,284</u>	<u>\$ 278,569</u>	<u>\$ 1,440,853</u>	<u>\$ 860,945</u>	<u>\$ 216,208</u>	<u>\$ 1,077,153</u>

32.3 Details of significant outstanding balances of receivables from and payables to the related parties as of December 31, 2024 and 2023 are as follows: (Korean won in millions and U.S. dollar in thousands) (cont'd)

	December 31, 2023					
	Receivables (*1)			Payables		
	Trade receivables	Others	Total	Trade payables	Others	Total
Parent company:						
POSCO Holdings Inc.	\	-	\ 200	\	-	\ 7,430
Associates:						
POSCO MEXICO PROCESSING CENTER HOLDING, LLC.	\	74,139	\ 74,139	\	4,412	\ 4,531
Gyeonggi Green Energy Co., Ltd.	10,714	8,450	19,164	-	149	149
POSCO-MALAYSIA SDN.BHD.	18,756	-	18,756	75	-	75
POSCO-ITPC S.P.A.	1,819	-	1,819	68	61	129
Noeul Green Energy Co., Ltd.	-	1,808	1,808	-	-	-
YULCHON MEXICO S. A. DE C. V.	961	-	961	-	-	-
POSCO-ESDC LTD.	-	-	-	1,029	701	1,730
POSCO IJPC	71,441	-	71,441	-	-	-
Samcheok Blue Power Co., Ltd.	7,870	-	7,870	-	-	-
Shanghai Lansheng DAEWOO Corp	-	-	-	-	383	383
Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	-	-	-	-	633	633
GENERAL MEDICINES CO., LTD.	807	426	1,233	-	78	78
KOREA LNG LTD.	-	1,289	1,289	-	-	-
DMSA/AMSA	-	103,016	103,016	-	-	-
GLOBAL KOMSCO DAEWOO LLC.	-	2,177	2,177	-	38	38
Blue Ocean Recovery PEF No.1	-	-	-	-	10	10
Others:						
POSCO	\	202,405	\ 205,718	\	1,272,647	\ 1,303,398
PT. KRAKATAU POSCO	593,109	-	593,109	11,693	201	11,894
POSCO-CSPC	53,699	-	53,699	535	-	535
POSCO-ICPC	51,645	1	51,646	-	-	-
POSCO Eco & Challenge Co., Ltd.	53,154	3,282	56,436	9,843	17,823	27,666
POSCO-TNPC	48,362	-	48,362	-	-	-
POSCO-CTPC	8,145	-	8,145	-	-	-
POSCO-FOSHAN STEEL PROCESSING CENTER CO., LTD.	17,503	-	17,503	1,171	65	1,236
POSCO VIETNAM HOLDINGS	40,721	-	40,721	210	-	210
POSCO ASSAN TST STEEL INDUSTRY	14,677	306	14,983	-	1,632	1,632
Others	370,830	1,369	372,199	62,333	404,754	467,087
	<u>\ 1,640,757</u>	<u>\ 125,637</u>	<u>\ 1,766,394</u>	<u>\ 1,364,016</u>	<u>\ 464,828</u>	<u>\ 1,828,844</u>
	<u>\$ 1,116,161</u>	<u>\$ 85,467</u>	<u>\$ 1,201,628</u>	<u>\$ 927,902</u>	<u>\$ 316,210</u>	<u>\$ 1,244,112</u>

(*1) Allowance for doubtful accounts for the above receivables as of December 31, 2024 and 2023 amounts to \ 132,386million (\$90,059 thousand) and \ 132,256 million (\$89,970 thousand), respectively.

32.4 Details of fund transactions with the related parties

Details of fund transactions with the related parties for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		
	2024		2023
	Investment	Recovery	Investment
Investments in associates and joint venture:			
SOUTH-EAST ASIA GAS PIPELINE CO., LTD.	\ -	\ 28,667	\ -
	\$ -	\$ 19,501	\$ -

32.5 Key management personnel compensation

Compensations for key management personnel for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Short-term employee benefits	\ 24,378	\ 24,278	\$ 16,584
Long-term employee benefits	17	12	12
Retirement benefits	2,417	1,688	1,644
	\ 26,812	\ 25,978	\$ 18,240

32.6 Guarantees provided to the related parties

Guarantees provided to the related parties as of December 31, 2024 and 2023 are disclosed in Note 20.6.

33. Statement of Cash Flows

33.1 Changes in assets and liabilities resulting from operating activities for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Reconciliation of profit for the year to net cash flows			
Depreciation \	275,550	275,124	\$ 187,449
Amortization	232,203	259,892	157,961
Depreciation of investment properties	3,558	3,024	2,420
Retirement benefits	26,042	21,112	17,716
Bad debt expenses	(17,648)	(24,122)	(12,005)
Interest expenses	292,371	282,071	198,892
Loss on valuation of financial assets at FVPL	259	3,145	176
Loss on disposal of financial assets at FVPL	-	240	-
Gain on disposal of investment of associates	-	(1,043)	-
Loss on disposal of investment of associates	28,765	5,373	19,568
Impairment loss on investment in associates	117,217	-	79,739
Impairment loss on other non-current assets	1,994	-	1,356
Loss on foreign currency translation	377,075	119,309	256,514
Loss on settlement of derivatives	-	3,309	-
Loss on valuation of derivatives	126,995	86,137	86,391
Reversal of other allowance for doubtful accounts	(289)	(123)	(197)
Other bad debt expenses	21,498	9,444	14,624
Loss on disposal of property, plant and equipment	5,771	6,552	3,926
Impairment loss on property, plant and equipment	73,421	8,622	49,946
Loss on disposal of intangible assets	98	142	67
Impairment loss on intangible assets	9,722	9,287	6,614
Income tax expense	203,206	234,203	138,235
Loss on valuation of inventories	15,122	3,009	10,287
Financial guarantee expense	8	113	5
Loss on investment in associates	18,570	20,461	12,633
Other expenses	133,299	97,146	90,679
Gain on valuation of financial assets at FVPL	(3,175)	(7,923)	(2,160)
Interest income	(62,695)	(61,563)	(42,650)

33.1 Changes in assets and liabilities resulting from operating activities for each of the two years in the period ended December 31, 2024 are as follows: (cont'd)

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Reconciliation of profit for the year to net cash flows			
Dividends income	(309)	(386)	(210)
Gain on foreign currency translation	(266,832)	(82,268)	(181,518)
Gain on disposal on financial assets at FVPL	(4,358)	(7,735)	(2,965)
Gain on settlement of derivatives	(1,936)	(3,633)	(1,317)
Gain on valuation of derivatives	(160,035)	(48,255)	(108,867)
Gain on disposal of property, plant and equipment	(8,975)	(904)	(6,105)
Gain on disposal of intangible assets	(3,408)	(33)	(2,318)
Reversal of impairment loss on intangible assets	(764)	-	(520)
Reversal of loss on valuation of inventories	(1,322)	(17,390)	(899)
Financial guarantee income	(104)	(76)	(71)
Stock compensation cost	-	16,970	-
Gain on investment in associates	(146,320)	(111,768)	(99,537)
Gain on disposal of assets held for sale	-	(7,461)	-
Gain on fair value valuation of biological assets	(3,809)	(830)	(2,591)
Other income	(20,304)	(233)	(13,812)
	\ 1,260,461	\ 1,088,939	\$ 857,456
Changes in operating assets and liabilities:			
Trade receivables	94,279	(213,531)	64,135
Other current receivables	(20,963)	(5,396)	(14,261)
Other current assets	(79,779)	55,522	(54,271)
Inventories	(65,280)	91,243	(44,408)
Other non-current receivables	(13,946)	2,106	(9,487)
Other non-current assets	(14,565)	6,655	(9,908)
Trade payables	(483,472)	10,091	(328,893)
Other current payables	86,127	(77,003)	58,590
Other current liabilities	52,838	(19,358)	35,944
Other non-current payables	(3,126)	315	(2,127)
Other non-current liabilities	5,241	5,230	3,565
Provisions	(62,083)	(94,374)	(42,233)
Retirement benefits paid	(10,264)	(1,687)	(6,982)
Increase in plan assets	(43,183)	(46,245)	(29,376)
	\ (558,176)	\ (286,432)	\$ (379,712)

33.2 Changes in liabilities arising from financing activities for each of the two years in the period ended December 31, 2024 are as follows: (Korean won in millions)

	2024						
	Beginning balance	Increase due to merger	Cash flows arising from financing activities	Non-cash flows			Ending balance
				Reclassification	Exchange rate fluctuation	Others	
Current portion of lease liabilities	\ 74,361	\ -	\ (42,216)	\ 28,594	\ 5,090	\ 9,660	\ 75,489
Short-term borrowings	1,591,538	-	(56,902)	-	64,957	-	1,599,593
Current portion of long-term borrowings	238,964	-	(179,350)	374,331	35,804	(1,088)	468,661
Current portion of bonds	876,709	-	(877,380)	1,027,215	89,980	1,211	1,117,735
Long-term lease liabilities	347,466	-	(32,412)	(28,594)	20,905	26,908	334,273
Bonds	1,864,114	-	701,936	(1,027,215)	26,939	1,323	1,567,097
Long-term borrowings	1,214,915	-	235,408	(374,331)	42,289	22,365	1,140,646
	<u>\ 6,208,067</u>	<u>\ -</u>	<u>\ (250,916)</u>	<u>\ -</u>	<u>\ 285,964</u>	<u>\ 60,379</u>	<u>\ 6,303,494</u>
U.S. dollar in thousand	<u>\$ 4,223,175</u>	<u>\$ -</u>	<u>\$ (170,691)</u>	<u>\$ -</u>	<u>\$ 194,533</u>	<u>\$ 41,074</u>	<u>\$ 4,288,091</u>
	2023						
	Beginning balance	Increase due to merger	Cash flows arising from financing activities	Non-cash flows			Ending balance
				Reclassification	Exchange rate fluctuation	Others	
Current portion of lease liabilities	\ 66,305	\ 4,129	\ (31,953)	\ 10,646	\ 240	\ 24,994	\ 74,361
Short-term borrowings	1,877,161	32,742	(344,818)	-	26,453	-	1,591,538
Current portion of long-term borrowings	121,208	359,698	(467,918)	189,017	36,959	-	238,964
Current portion of bonds	399,841	199,907	(600,000)	872,158	4,378	425	876,709
Long-term lease liabilities	241,405	73	(59,558)	(10,646)	4,671	171,521	347,466
Bonds	1,363,594	958,403	398,613	(872,158)	13,448	2,214	1,864,114
Long-term borrowings	792,557	476,201	141,288	(189,017)	7,609	(13,723)	1,214,915
	<u>\ 4,862,071</u>	<u>\ 2,031,153</u>	<u>\ (964,346)</u>	<u>\ -</u>	<u>\ 93,758</u>	<u>\ 185,431</u>	<u>\ 6,208,067</u>
U.S. dollar in thousand	<u>\$ 3,307,531</u>	<u>\$ 1,381,737</u>	<u>\$ (656,018)</u>	<u>\$ -</u>	<u>\$ 63,781</u>	<u>\$ 126,144</u>	<u>\$ 4,223,175</u>

33.3 Major investing activities and financing activities that are accompanied by non-cash transactions for each of the two years in the period ended December 31, 2024 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2024	2023	2024
Actuarial gains and losses remeasurement component	\ (15,211)	\ (22,683)	\$ (10,348)
Other accounts payable related to the acquisition of property, plant and equipment and intangible assets	13,292	32,963	9,042
Reclassification of financial assets at FVOCI as investments in associates	-	(14,006)	-
Reclassification of current portion of long-term borrowings	374,331	189,017	254,647
Reclassification of current portion of long-term bonds	1,027,215	872,158	698,786
Reclassification of current portion of lease receivables	15,909	25,766	10,822
Reclassification of current portion of lease liabilities	28,594	10,646	19,452
Recognition of right-of-use assets and lease liabilities through acquisition	49,696	193,223	33,807

In connection with the merger and absorption of POSCO Energy Co., Ltd. for the year ended December 31, 2023, non-cash transactions amounting to \ 233,902 million (\$159,117 thousand) occurred due to the issuance of new shares and the acquisition of treasury stocks (see Note 35).

34. Uncertainty of the impact of the Myanmar coup

The military government of Myanmar declared a state of emergency in February 2021, announcing the establishment of a transitional government, and has maintained its military rule by repeatedly extending the period of emergency. Meanwhile, in February 2022 and November 2023, economic and financial sanctions were announced by the European Union and the U.S. government against Myanmar State Oil and Gas Company (MOGE), which holds a 15% stake in Myanmar's A-1/A-3 gas field project. The business, in which the Group holds a 51% stake, is operating normally, and the Group is continuously monitoring situations that may have an impact, such as additional economic and financial sanctions from the international community. As of December 31, 2024, the impact on the business of the Group such as Myanmar gas field in the future could not be estimated reasonably, and the impact from this was not reflected in the consolidated financial statements.

35. Business combination

35.1 Business combination overview

The Group absorbed and merged with POSCO Energy Co., Ltd. for the year ended December 31, 2023. The purpose of this business combination is to strengthen competitiveness and improve management efficiency by integrating the Group's energy business and completing the LNG business value chain, and to lay the foundation for sustainable growth.

	Information
Surviving corporation after merger	POSCO INTERNATIONAL
Extinct corporation after merger	POSCO Energy Co., Ltd.
Board resolution date	August 12, 2022
Date of merger	January 1, 2023
Ratio of merger	POSCO INTERNATIONAL : POSCO Energy Co., Ltd. = 1 : 1.1626920

35.2 Accounting for business combination

The business combination is a business combination under the common control, and the assets acquired and liabilities assumed through this business combination were recognized at the book amount in the consolidated financial statements of the top controlling company. The Group recorded the difference between the issue price of new merged shares and the book value of the acquired net assets in capital surplus.

The book amounts of identifiable assets and liabilities acquired through a merger under the common control are as follows:

	Korean won in millions	U.S. dollar in thousands
<Consideration transferred>		
Issuance of new shares (number of shares issued: 52,547,639 shares)	\ 262,738	\$ 178,733
Treasury stock	(28,836)	(19,616)
	\ 233,902	\$ 159,117
<Identifiable assets acquired and liabilities assumed>		
Current assets		
Cash and cash equivalents	\ 606,711	\$ 412,729
Trade and other receivables	646,244	439,622
Other current financial assets	40,167	27,324
Derivative financial assets	6,193	4,213
Other current assets	167,768	114,128
Inventory	268,331	182,538
	\ 1,735,414	\$ 1,180,554
Non-current assets		
Long-term trade and other receivables	\ 220,210	\$ 149,803
Other non-current financial assets	18,725	12,738
Long-term derivative financial assets	7,972	5,423
Associates and joint ventures	548,098	372,856
Property, plant and equipment	1,914,872	1,302,634
Right-of-use assets	32,094	21,833
Intangible assets	64,636	43,970
Net defined benefit assets	13,085	8,901
Other non-current assets	57,184	38,901
Deferred tax assets	90,893	61,832
	\ 2,967,769	\$ 2,018,891
Current liabilities		
Trade and other payables	\ 484,433	\$ 329,546
Borrowings	392,440	266,966
Current portion of bonds	199,907	135,991
Derivative financial liabilities	1,585	1,078
Current portion of provisions	130,724	88,928
Other current liabilities	144,517	98,311
Current income tax liability	46,251	31,463
	\ 1,399,857	\$ 952,283

35.2 Accounting for business combination (cont'd)

	Korean won in millions	U.S. dollar in thousands
Non-current liabilities		
Long-term trade and other payables	\ 717	\$ 488
Long-term borrowings	476,201	323,946
Bonds	958,403	651,975
Long-term derivative financial liabilities	170	116
Other non-current liabilities	7,725	5,255
Net defined benefit liabilities	106	72
Provisions	106,537	72,474
Deferred tax liabilities	23,954	16,295
	\ 1,573,813	\$ 1,070,621
Equity		
Accumulated other comprehensive income	\ 8,497	\$ 5,780
Hybrid bonds	139,571	94,946
Non-controlling interests	73,648	50,101
	\ 221,716	\$ 150,827
<Equity arising from business combination>		
Capital surplus	\ 1,273,896	\$ 866,596

The sales and net profit generated from the business operated by POSCO Energy Co., Ltd. after the merger are \ 2,998,669 million (\$2,039,911 thousand) and \ 203,334 million (\$138,322 thousand). In addition, sales and net income generated from businesses conducted by POSCO Energy Co., Ltd.'s subsidiaries, associates, and joint ventures prior to the merger are disclosed in Note 1 and Note 9, respectively.

36. Events after the reporting period

On February 3, 2025, the Company's Board of Directors resolved to absorb and merge its subsidiary, NEH Co., Ltd. with the merger date of April 28, 2025.

Audit opinion on internal control over financial reporting

The accompanying independent auditor's report on internal control over financial reporting is attached as a result of auditing the internal control over financial reporting of POSCO INTERNATIONAL Corporation (the "Company") and its subsidiaries (collectively referred to as the "Group") and the consolidated financial statements of the Group for the year ended December 31, 2024 in accordance with the Article 8 of the *Act on External Audit of Stock Companies*.

Attachments:

1. Independent auditor's report on internal control over financial reporting
2. Report on Operating Status of Internal Control over Financial Reporting



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Independent auditor's report on internal control over financial reporting (English translation of a report originally issued in Korean)

The Shareholders and Board of Directors POSCO International Corporation

Opinion on internal control over financial reporting

We have audited the internal control over financial reporting ("ICFR") of POSCO International Corporation and its subsidiaries (collectively referred to as the "Group") based on the Conceptual Framework for Design and Operation of ICFR established by the Operating Committee of ICFR in Korea (the "ICFR Committee") as of December 31, 2024.

In our opinion, the Group's ICFR has been effectively designed and operated, in all material respects, as of December 31, 2024 in accordance with the Conceptual Framework for Design and Operation of ICFR.

We also have audited, in accordance with KSA, the consolidated statement of financial position as of December 31, 2024, and the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and the notes to the consolidated financial statements, including material accounting policy information, of the Group, and our report dated March 12, 2025 expressed an unqualified opinion thereon.

Basis for opinion on ICFR

We conducted our audit in accordance with KSA. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of ICFR section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of ICFR in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibility of management and those charged with governance for ICFR

Management is responsible for designing, implementing and maintaining an effective ICFR, and for assessing the effectiveness of the ICFR included in the accompanying Report on Operating Status of Internal Control over Financial Reporting.

Those charged with governance are responsible for overseeing the Group's ICFR process.

Auditor's responsibilities for the audit of ICFR

Our responsibility is to express an opinion of the Group's ICFR based on our audit. We conducted our audit in accordance with KSA. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective ICFR was maintained in all material respects.

An audit of the ICFR involves performing procedures to obtain audit evidence as to whether a material weakness exists. The procedures selected depend on the auditor's judgment, including the assessment of the risks that a material weakness exists. An audit also includes testing and evaluating the design and operation of ICFR based on obtaining an understanding of ICFR and the assessed risk.



ICFR definition and inherent limitations

A company's ICFR is implemented by those charged with governance, management, and other employees and is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("KIFRS"). A company's ICFR includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with KIFRS, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the consolidated financial statements.

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

The engagement partner on the audit resulting in this independent auditor's report is Sang-il Bae.

March 12, 2025

This audit report is effective as of March 12, 2025, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditor's report to the time this report is used. Such events and circumstances could significantly affect the Group's ICFR and may result in modifications to this report.

Report on Operating Status of Internal Control over Financial Reporting
English translation of a report originally issued in Korean

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

We, as the Chief Executive Officer and the Internal Control Officer of POSCO International Corporation and its subsidiaries (the “Group”), assessed operating status of the Group’s Internal Control over Financial Reporting (“ICFR”) as of December 31, 2024.

Design and operation of ICFR is the responsibility of the Group’s management, including the Chief Executive Officer and the Internal Control Officer (collectively, “We”).

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

We used the ‘Conceptual Framework for Design and Operation of Internal Control over Financial Reporting’ for evaluating design and operation of the Group’s ICFR, established by the Operating Committee of Internal Control over Financial Reporting in Korea (the “ICFR Committee”).

Based on our assessment, we concluded that the Group’s ICFR is designed and operated effectively as of December 31, 2024, in all material respects, in accordance with the ‘Conceptual Framework for Design and Operation of Internal Control over Financial Reporting’.

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

February 3, 2025

/s/ Lee, Kye-in Chief Executive Officer

/s/ Chung, Kyung-jin, Internal Control Officer